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PRIZE ESSAY

ON THE BEST MEANS FOR

Preventing the Destruction of various Crops by Birds, Insects, &c.

By THOS. S. PLEASANTS, of Petersburg, Va.

[To the following Treatise was awarded the Premium of \$20, offered by the *Maryland State Agricultural Society*.—The committee, consisting of Dr. Jos. E. MUSE, of Dorchester Co., Col. W. W. W. BOWIE, of Prince George's Co., and F. P. BLAIR, Esq. of Montgomery Co., made their award at the Quarterly Meeting of the Managers of the Society, on the 7th February, 1849—which was approved of, and the Essay ordered to be published in the *AMERICAN FARMER*.]

AMONGST the various plants cultivated by the hand of man, a large number appear to have their peculiar enemies. Thus wheat is liable to be attacked, and is not unfrequently destroyed by the Hessian fly; corn by the cut-worm; tobacco by the tobacco-worm; and cotton by the boll-worm. The cultivated trees also, including those both for use and ornament, are subject to similar injuries. The apple tree has its borer and canker-worm; the peach its grub; the pear its aphid, producing its blight; the plum its curculio; and the noble elm its own peculiar enemy which congregates upon it in immense numbers, destroying it in its pride of foliage, while it appears to be harmless to every thing besides. The list might be extended so as to embrace many other plants.—Thus, in addition to the labor of cultivation, man has to contend with difficulties oftentimes of a more serious nature, the whole of which combined causes him to realize in its full extent the burden imposed upon him in the beginning, that he should earn his bread by the sweat of his brow.

To discuss the subject in full would require a space far exceeding the limits of an essay. Moreover, human ingenuity has been taxed to the utmost without discovering any preventive in many of the cases cited. All that can be done is in the way of palliation; by waging, namely, a war of extermination, so as to diminish the injury by a reduction of their numbers. The tobacco fields, for instance, must be overlooked at stated times, and the young brood of worms destroyed by hand; and the roots of the peach tree must be annually examined and cleaned of the grub. This treatment, however, it is impossible to extend to many of the insects which in-

fest our crops; and it is only by a judicious cultivation that their depredations can be even partially guarded against.

In regard to Birds, it is believed that they are, on the whole, a benefit and a friend to the farmer rather than a nuisance. The writer will therefore venture to take the position that the safety of our crops justifies their protection rather than their destruction. Birds of nearly every feather,—those at least which are most familiar to us,—feed upon insects, and thereby prevent the enormous increase which would otherwise attend these pests. Every farmer has doubtless observed how eagerly his barn-yard fowls follow the plough in search of the worms that are exposed to view. The number of insects destroyed by a flock of turkeys is incalculable. Their predatory habits are sometimes exceedingly annoying, inasmuch that the farmer would oftentimes rejoice if his good wife would give them up; but she is undoubtedly rendering him a service in every young flock that she turns out upon his grounds.—But it may be said there is a necessity for rearing fowls. Let us then advert to those which are not under our control. And first, of the crow: By common consent he is regarded with almost as much antipathy as that which we hereditarily cherish for snakes. None ever passes in reaching distance of the fowler that he does not discharge his gun at him. All the good lessons we have been taught in our childhood against cruelty to birds, have an exception in him. His nests are plundered, and the young destroyed, by all classes. Even premiums have been offered for their scalps by grave legislative bodies. The sagacity by which he is enabled to elude his

pursuer only serves to stimulate the desire to destroy him. And after all, what do his offences amount to? The most serious depredation he commits is to tear up the young corn in the spring, thus subjecting the farmer to the necessity of planting again. If there was no remedy for this, there would be some justification for the hatred with which he is pursued. But with a tithing of the trouble that is taken to destroy him, the seed corn may be effectually prepared so that he will have no relish for it. A pint of tar diluted in a quantity of hot water sufficient to cover a bushel of corn, will afford to each grain a coating which renders it distasteful to every bird. The crow, from his excessive timidity, may also be readily frightened away by stuffed figures, familiarly termed scare crows; or by anything of unusual appearance in the field. In smaller fields or patches, a few strings of cotton twine stretched across the ground will effectually keep him off. This is the common mode of protection in melon grounds, where crows are sometimes exceedingly mischievous; for they appear to have an especial fondness for pecking into young watermelons. They are also sometimes destructive in autumn. Their habits then become gregarious; and when they light on a field of corn which the farmer has permitted to remain ungathered too long, they are apt to diminish the product. Indeed, whole fields have sometimes been destroyed, but only when the growers have neglected to harvest them in good season. On the whole, then, it is confidently believed that even crows, which are amongst the most rapacious of birds, do far more good than harm. During the summer, when they are breeding, they destroy infinite numbers of insects, for the nourishment of their young, and thereby more than compensate for all the depredations they commit on the crops of the farmer. The same remarks will apply, with more or less modification, to other members of the feathered tribe. We would moreover consider that provision for birds was especially made by divine Providence, and that our hostility to them is therefore in contravention of the order of nature. "Behold the fowls of the air, for they sow not, neither do they reap, nor gather into barns; yet your heavenly Father feedeth them." "Shall he not then much more clothe [and feed] you, O ye of little faith?"

Seeing then that birds should be regarded as friends and not as enemies, the indiscriminate massacre to which they are subjected cannot be too severely reprobated. If there are any exceptions it is only in the case of hawks and owls, which not only prey upon all other birds of inferior strength and activity, but are particularly destructive to domestic fowls. Though they sometimes feed on moles and mice, and even snakes, yet on the whole no defence can be offered in their behalf.

It is therefore from the numerous orders of insects that the farmer suffers the greatest loss, and chiefly those in the diminution of whose numbers birds can afford him no essential relief. Some of these which do the greatest amount of damage to our field crops will now be particularly considered.

The Hessian Fly.—The Hessian fly "is a small two-winged fly or midge, nearly black," and was supposed to have been brought to America by the Hessian troops during the Revolution. Volumes have been written concerning this insect, and its natural history is well understood; but no discovery has been made by which it can be entirely arrested in its ravages. In the fall of the year, and again in the spring, it deposits its eggs on the blades of

the wheat, which hatch in the course of a few days—when the little maggots crawl to the bottom of the blades and find their nourishment in the juices of the plants. The circulation in the plants becomes thereby impeded: the blades first assume a dark green color, subsequently they turn yellow, and finally the whole plant perishes or lives out a sickly existence. The prevalence of the fly has been the means of bringing about a great revolution in the culture of wheat. Before it was known it was customary to sow from one to two months earlier than can be now done with safety. By early seeding, the stools acquired such strength as to enable them to tiller well in the spring, and the consequent early harvest secured the crop from another enemy, no less formidable than the fly, namely, rust. Since the introduction of the fly it has been found unsafe to sow wheat sooner than about the period of the first sharp frost. Even then, or in cases of still later sowing, there is no certain exemption from its ravages, while the change of seed-time renders it unprofitable to put any land to wheat which is not in a good state of improvement. The only compensation therefore to the farmer for the injury to his crops by the fly, and the necessity he is under of sowing late, is to place his wheat land in a condition to render it productive. He must give his wheat not only nourishment enough for the fly, but enough also to stimulate its growth beyond the abstraction of its juices which is caused by the fly. In favorable seasons he may then calculate on reaching the maximum degree of productiveness. But upon ordinary or poor lands, especially after corn, without the benefit of manure, the farmer is hardly ever reimbursed for his expenses in seed and labor.—Counting every expense, less than a crop of ten bushels to the acre will not yield a sufficient profit to justify the cultivation of wheat. And yet how many farmers there are whose crops fall greatly below that average, and who still persevere in the culture from year to year. The presence of the Hessian fly should then teach the farmer an important lesson. Indeed some persons have gone so far as to say that they considered it a blessing instead of a curse, from the absolute necessity created by its existence of using every means to increase the productiveness of the soil. Without fully receiving this opinion it is yet not without force; and he who adopts the plan of improvement for the purpose of obviating these difficulties which nature interposes to his success, is the only intelligent farmer—the only one who deserves success even when he does not command it.

The writer was once acquainted with a very practical and observant farmer who for many years (indeed as long as he knew him,) was in the habit of sowing as much of his crop of wheat as he could accomplish during the month of July. Wheat sown then, he remarked, was never injured by the fly, while that sown in August and September was invariably destroyed. The reason is that the fly does not make its appearance so early in the season, but it becomes very numerous by the time the grain left in the harvest fields begins to vegetate, which is seldom or never before August. By that time the wheat sown in July either gets strong enough to resist the fly, or, which is more probable, is not regarded as so good a matrix for the deposit of its eggs as the younger and tenderer growth of August. The success of the gentleman spoken of was invariably good whenever there was sufficient moisture in the land to promote the germination of the grain. In

consequence, however, of the drought which frequently prevails during that month, there is of course some uncertainty on this point. But even if only one-fourth of the seed vegetates, the plants acquire such vigor during the autumn that a single one is more productive at harvest than several from seed sown in October or November on land of the same quality. Moreover, the wheat ripens so early as to be in a great measure, if not entirely, exempt from rust. The writer has witnessed several experiments, made by other gentlemen, of seeding wheat in July, all of which were successful; but he only remembers the facts connected with one of them.—On a small field of about six acres, on which a crop of cotton was growing, the wheat was seeded at the time of the last working. Owing to dry weather, but a small portion of the seed vegetated,—scarcely a peck, and probably even less to the acre. By the fall the stools had acquired an enormous size, each one covering a space probably equivalent to a square foot; and yet there was a good deal of vacant ground. At harvest the crop was 22 bushels to the acre, full twice as much as the land could have yielded under ordinary circumstances, or had ever yielded before. The gentleman who grew it, formerly a near neighbor of the writer, is yet living, and could testify to the truth of the statement; but it is not known whether he has continued the practice of summer seeding. Indeed, the energies of the farmer at that season are so busily directed to the cultivation and seeding of other crops, that it is an inconvenient time to break in upon his general routine; and it cannot therefore be expected he will do it without the prospect of decided advantage. It is respectfully submitted, however, to wheat growers, whether they might not, by making the necessary preparations in time, advantageously devote a small space to this object, at least for the sake of experiment. In those latitudes where the wheat crop is harvested in June, it would be entirely practicable. Farther north, the time for sowing should doubtless be regulated according to the progress of the season.

Chinch Bug.—This insect has the same disgusting smell as the domestic bug of the same name, and is a species of a very numerous genus. It is well known in all the Atlantic States south of the Potomac; but north of that it is believed to have made very little progress. It is a winged insect, though it seldom flies; and then only at short distances, in the summer, when it is in search of a place to deposit its eggs. Its prolificness is extraordinary. It has been estimated that in every two weeks a new generation is brought into existence. The young insect is of a reddish color, and as soon as it is hatched it begins to suck the sap of the plants on which it is propagated. When it has reached its full size it is nearly black. Fortunately, the chinch-bug does not prevail every year: it is only once in four or five years that it appears in such incalculable numbers. What becomes of them in the meantime—whether they are destroyed by the severity or changeableness of the winters—has not been satisfactorily ascertained. They choose for their refuge during cold weather places covered with litter; but chiefly the woods, either amongst the leaves, in the old stumps, or in the bark of trees. When their state of hibernation is over, they emerge from their winter quarters and congregate on the tender wheat; and in a few days hatch out a young brood which immediately commences the work of destruction. The wheat is seldom entirely killed, but continues to make a feeble growth and to put up its stems until harvest. At the

time of ripening it changes to a pale, almost to a white color; the heads are destitute of grain, and the stalks offer little more resistance to the scythe than so much dry straw. After the field is reaped, they abandon it and march to the nearest corn or oats.—Oats, however, in the state in which they find it, offers but few attractions; but the rich and saccharine juice of the corn is a favorite food. To see them marching in myriads from one field to another is an appalling sight. They remain on the corn as long as it affords them any nourishment—increasing their progeny between the sheaths of the blades and the stalks—after which they spread themselves out on the various kinds of natural grasses growing amongst the corn, such as the bottle-brush, crop-grass, &c. Various expedients have been resorted to to stay their ravages, but none has proved entirely effectual. When they leave the wheat for the corn, they collect on the first few rows, covering them and almost blackening them by their numbers; and if they are vigorously attacked at that time, by killing as many as possible by hand, and burning those which take shelter from the hot sun under heaps of litter laid for the purpose, their numbers may be materially diminished.

Weevil.—The weevil is a moth, sometimes very destructive to wheat and corn, and originates from eggs laid on the ear in its green state, in the same manner as the pea-bug in the case of the English or garden pea. It is very distinct from an insect of the same name which is frequently found in great numbers in mills and granaries, and which is more properly a beetle. When the wheat is left to remain in the straw for any length of time after harvest, the weevil is almost certain to make its appearance. Threshing the grain as early as possible, and throwing it into bulk in the chaff, arrests its progress in a great measure, owing to the absence of the necessary conditions for hatching the eggs. In those districts of country where the weevil was formerly very destructive, farmers have learned to guard against its ravages by sending their crops into market without delay.

As the course of remark thus far, in regard to insects, has been chiefly in connexion with wheat, it may not be deemed irrelevant to extend a little further consideration to the subject of the wheat crop. Of all cereal grains grown for the sustenance of man, it is undoubtedly the most important. In some particular countries others may take the precedence, as for instance the rice in Asia. In America also, the maize or Indian corn can scarcely be considered of secondary value. But no other grain is subject to the same number of casualties as wheat. It is liable to almost as many ills as flesh is heir to. Besides the enemies already enumerated, it is sometimes seriously injured, and indeed almost destroyed by the smut and rust; and if the opinion of the great majority of farmers is entitled to implicit credence, it is transmutable into cheat and spelt. From various causes therefore it is the most precarious of crops. The smut, with due precaution, needs not to be feared; but for the rust no adequate preventive has yet been discovered. It cannot be doubted that the intelligence of man is competent to such an achievement; but, with due deference, it is believed that its powers have not been concentrated upon it with the force which its importance demands. If half the ingenuity had been exercised in this branch of enquiry, as has been done in endeavoring to establish the transmutation of wheat, it is not unreasonable to suppose that the most important results

might have been attained. But the usual practice of farmers has been unfavorable to the establishment of any definite principles in regard to rust. Whenever a new variety of wheat is brought into notice, every one tries to obtain it as soon as possible, and discards the old. If a farmer in a neighborhood raises a productive crop, others resort to him for seed, in the hope that it is better than the varieties they have been cultivating. As long as the propensity proceeds merely from a spirit of change or novelty, no good results can be expected. What we need is a well considered series of experiments made with prominent varieties of wheat, sown at different times on soils of various qualities, with or without the application of several kinds of manures, as the case may be; and the results accurately noted. In the meantime, however, there can be no doubt that a fund of valuable information might be obtained, if the proper measures were taken to elicit it. The object of these remarks therefore is to draw the attention of the Agricultural Society of Maryland to this subject, with a view of collecting such well attested facts as would admit of generalization. At what time does the rust begin to manifest itself? What is the character of the weather for a few days preceding the attack? What is the nature of the soil? Does the rust prevail on calcareous soils, or soils dressed with ashes, to the same extent as on neutral or acid soils? Does the early sown wheat escape, when the late sown wheat is attacked? Or are early varieties more exempt than late varieties? Are certain portions of the same field liable to rust, while others are exempt—and what are the distinguishing points of difference between them? Careful observations and reports made in reference to these and other appropriate subjects of investigation might be of incalculable importance to the wheat growing interest. Of course, it is unreasonable to expect that the rust can be entirely prevented in all seasons and under all conditions, any more than that man can at all times effectually guard himself against the approach of disease. But in the one case, as in the other, the intelligent mind may be able to attain a degree of safety which will seldom be realized by the ignorant and thoughtless. It is now well ascertained that the rust is a fungus or parasitic plant—the seeds of which, so to say, being wafted in the air, fall on the wheat plant, where they vegetate and strike their roots into the stems and leaves. They grow with such rapidity that in a few days they throw out spores and pass through all the stages of their existence. The popular opinion, therefore, that rust is caused by extravasation of the sap, proceeding from plethora, is erroneous. Its effect is to exhaust the juices of the plant for its own support, but with a suddenness far transcending the powers of insects. Certain conditions, however, are necessary to the complete development of the rust. Hot, sultry weather promotes it; while dry, cool weather retards or prevents it. If the wheat is nearly ripe, it can do but little damage; if it is rank, and green, and full of sap, it will fall a certain prey, provided the season is at all unfavorable. It is believed that the rust never makes its appearance till the season has advanced to a certain stage; hence by early sowing, and the use of stimulating manures, especially guano, it is regarded as practicable to anticipate its accession by an early harvest.

Since it is obvious then that the effect of rust bears a resemblance to that of insects, the writer ventures to repeat the hope that his remarks will not be found inappropriate or uninteresting.

Cut Worm.—This grub is sometimes very destructive to the young corn, from the time it begins to show itself above the ground until the weather becomes hot. It then either undergoes one of the changes of its life, or the hot sun causes it to retreat further beneath the surface,—probably the former. To some extent it commits depredations on other plants, particularly garden vegetables, during the summer; but it is most numerous in the spring. The cut-worm prevails on all lands covered with sod, or standing in clover or weeds. The only preventive is fall or winter plowing, which is destructive to the eggs or the larvæ, by exposing them to the action of the frost.

Moles and Mice.—In light soils these little animals are frequently great pests, the latter being found generally to accompany the former. It has been the opinion of some naturalists, and, amongst the rest, of the gentle and accomplished Godman, that the mole does no other damage than by burrowing: that the field mouse follows in its track, and eats the grain, or gnaws the roots of such plants as it finds in the way. Dr. Godman dissected a number of moles, and found their stomachs to contain nothing but earth-worms or insects. He was of opinion that their teeth were not fitted for eating solid substances. The carefully formed opinions of a naturalist should be received with the greatest respect, but it is well known that moles bite with severity enough to inflict a good deal of pain. The writer has the authority of a highly respectable neighbor for stating that he has nearly destroyed the moles in the grounds around his house by occasionally dropping in their tracks bread pills containing a small quantity of arsenic—say a fourth or a half grain to each hill.—The Palma Christi bean also causes them to disappear; but whether they are repelled by its odor, or, which is more probable, whether they are destroyed by the coating of the seed, which is said to be poisonous, is not certainly known. It is believed that moles are seldom very numerous in cultivated grounds, as a single one, by his industry and perseverance, will work his way through a considerable space. But they seldom or never wander to any remote distance; for the same track, though it may cross a frequented road, and therefore be liable to be pressed down every day, as well as to be closed by rains, has been known in repeated instances to be re-opened and continued in use for a succession of years.

In submitting the preceding remarks the writer has not resorted to the use of scientific terms, as they are probably not familiar to the majority of farmers; and even if they were, popular language is entirely sufficient for discussing the subjects which have been brought under review. In fact, those authors who have made birds and insects a matter of scientific study, have contributed only in a small degree to the benefit of the farmer. Nor is the contrary to be expected, for theirs is a distinct branch of knowledge. Years of close observation, and the daily experience of active life, are necessary for the acquisition of that kind of knowledge which the farmer requires. Much yet remains to be learned; and if the writer has been so fortunate as to submit any views which may serve, in the slightest degree, to add to what is already known, or to stimulate those interested to a more watchful observation, he will have accomplished all that he could reasonably have anticipated.

THOS. S. PLEASANTS.

Petersburg, Va., November, 1848.

PRIZE ESSAY ON DRAINING,

By Edward Stabler, of Montgomery County, Md.

To which was awarded the Premium of \$20, offered by the *Maryland State Agricultural Society.*

To undertake writing an Essay on Draining, which can claim much originality of thought, or successful practice, after the extended and varied plans detailed in many of the agricultural papers of the day, would certainly be a difficult task. I do not therefore propose to do much more than to call the attention of such to the subject, as are not practically familiar with the great advantages of draining; and also to state the method that my experience has proved to be both efficient and economical.

As just remarked, various plans have been suggested, and advocated; and probably successfully carried out in practice, where the location of the ground, the volume of water to be carried off, and other attending circumstances, were alike suited to each other: and having at different periods, practiced several of the plans—or modifications of them—recommended by others, I have long since come to the conclusion, that with the exercise of a reasonable degree of good judgment in locating the drains, much benefit may be derived from adopting most of these different methods: nor is the art either complicated or difficult, if rightly commenced. I am fully satisfied from my own experience in draining, that if the operation is well conducted, few expenditures of the same amount of time and money, make a more profitable return to the husbandman. On the contrary, if not well done, it is sometimes rather worse than a mere loss of so many dollars and cents; for the operator becomes discouraged by his want of success; and thus permits some of his best land to lie waste, or nearly so; for no land that really requires draining of super-abundant moisture, will return much profit, even though it is manured at a heavy expense.

It is an old and true saying, "anything that is worth doing at all, is worth doing well;" and there are few operations required on the farm, to which the remark applies with more force, than to draining: for lands that are well drained, will produce better crops, not only in wet, but also in dry seasons; and if required, and not done, they will not produce good crops at any season.

It is scarcely necessary to enter into any argument at the present day, to prove the advantages of draining. They are so apparent, that even the experience of the most illiterate farm laborer, clearly points out the remedy, as his scythe passes through, or his rake gathers, the sour and stunted growth of unpalatable hay; although he may not be competent to arrange the details in the most successful manner. Again, to judge from past experience, I have little doubt that there are situations in which draining may be made to repay ten times the cost; as well by the increased product of the soil, which is often doubled, if not quadrupled, solely by the operation, but also by so changing the course of the water, as to render what is considered a nuisance, one of real and lasting benefit.

I will refer to a case in point, to illustrate my views, and as an evidence of the advantages which sometimes result; and from which, the benefit overbalances the cost some ten, if not twenty fold. In a field nearly adjoining my barn, there was an acre or

two of low ground, forming something like a basin; which, from early in the fall, until late in the spring, was "wet and spongy;" too wet to produce a profitable crop of any kind. Immediately adjoining, was a lane and road, over which most of the farm hauling had to be done; and adjoining the lane on the other side, was an upland meadow—i. e. without running water on the surface, but interspersed with "wet weather springs." The soil on these portions of both fields, had for a long period received the washings of the adjoining lands; but for want of proper draining, were of little value for either cultivation, mowing or pasture; but the road which necessarily passed between them, being rather lower ground than either, was often rendered impassable for a loaded cart or wagon, by the spongy nature of the soil, and the accumulation of water from one of the adjoining fields; many loads of stone had been hauled to make it passable, but with only partial success: it was considered quite an annoyance, and I would at one time (before my attention was seriously turned to the subject of draining) have cheerfully given a handsome sum to remove it.

By carefully examining the flow of water, and the position of the adjoining land with a spirit level, it was ascertained that by a few hundred yards of under drains, the water which accumulated in the upper field, could be conveyed round, and above the road, and into a corner of the barn-yard—made to rise, and fill a large stone reservoir set level with the ground, and then pass entirely through the adjoining field, and effectually drain it also, by the addition of a few cross drains to intersect the main stem. The cutting and filling with stone was mostly done by the farm hands at leisure times; and all expenses included, did not exceed \$12 to \$15. And what are the results? The lands drained are some of the most productive on the farm—the product being increased fully two, if not three-fold—and there is a supply of pure running water for the stock at all times, (the extremes of drought and frost, excepted,) during the winter and spring; after which it ceases to run; but with the returning season, is sure to make its welcome appearance. A well previously sunk in the barn-yard, at a heavy expense, is now rarely used; and the improvement is considered cheap, take it altogether, at ten times the cost—add to the other advantages, the present available resources of the land by draining, which annually repays the entire cost several times over, and no doubt is entertained that the estimate is quite within bounds.* It is probable a similar case does not often occur, combining so many advantages at so trifling a cost; but it is believed a proper attention to the subject of draining, will often develop advantages

*One of my first applications of lime was on a portion of one of the fields just referred to; it remained inert, entirely so, for many years; and until the field was well drained: the effect of the lime on the succeeding crops was most marked, and its limit clearly defined by the increased growth of vegetation.

scarcely less desirable, and which are now lost, or rather, *not found*, merely for the want of a little tact and energy.

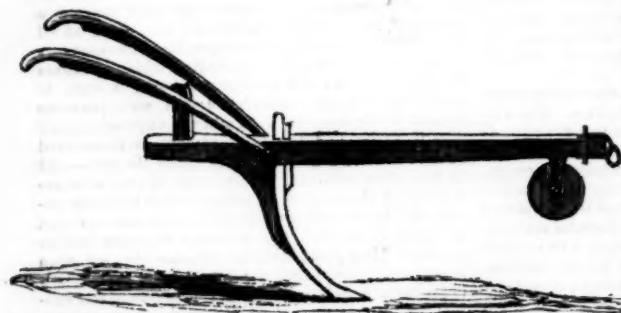
It must be obvious to all, that where the location of the land and other circumstances favor it, *under drains* are preferable; because, they admit of more convenient and extended cultivation. But if the volume of water to be carried off is considerable, and a constant stream, or the washings from the adjacent grounds are too great after heavy rains to pass off by the surface drains, it is best to have an open one of sufficient dimensions; and into this, the covered, or side drains should empty.

One of the most important points to be aimed at, in the great majority of cases—and for want of this attention, many have failed in the undertaking, when the operation was not only practicable, but easy of accomplishment—is, to have the inclination, or fall, uniform throughout; and in nearly all cases of *under-draining*, the fall should be as great as the situation of the ground will admit of: hence I have entirely dispensed with the hill-side under drains; for they are generally so near a dead level as very soon to clog or choke; and also frequently cause much unnecessary, if not useless expense, in ditching.

The plan I have adopted for a number of years, and with entire success (within the present year, I learn that it has now more advocates in many parts of England and Scotland than any other mode) is to open a drain through the lowest portion of the land; into this main drain, all the side drains empty—cutting down the slopes for them—and extending the length of each, to give as much fall as possible, without too far extending the cutting. It is best to regulate the fall carefully, with the level, either at the surface, before ditching, and then go to a uniform depth; or at the bottom of the drain. A uniform descent of the water is much more important than a few rods of ditching, even though it may also vary somewhat from a direct line. The annexed diagram will better explain the relative position of the side drains.

How far apart these side drains should be, can

Fig. 2.



the object, are extensively used in some parts of Europe, and strongly advocated: but I am not aware that they are as yet made in this country to any extent. To import them, would perhaps prove too expensive for the generality of farmers: and it is a matter of some surprise, after so much has been said and written on the subject, both in Europe and this country, that none of our ingenious mechanics—equal in in-

only be determined by the location of the ground, the kind of subsoil, and quantity of moisture. I have at times found it necessary to make them within 20 to 25 feet of each other; and again, have effectually reclaimed an acre, or more, with a single under-drain, of not more than as many yards in length.

Fig. 1.
BIRD'S EYE VIEW.



which to spread lime on grass fields—and sow grass seed; and also to work between the rows in root crops, which it does most effectually to the *depth* of 12 inches; and without materially displacing the surface soil. It is merely a white oak beam about 4 feet long, 4 by 5 inches square, with a projecting limb as a support for the iron tooth. This is a bar of iron, 24 inches long, 1½ inches square, curved forward, steeled, and flattened at the extremity.

In subsoiling, a pair of horses, or yoke of oxen will readily loosen the clay to the depth of from 9 to 12 inches; and in opening drains, a single horse walking within the banks will in many situations materially save in the spade labor; and of course save expense and expedite the operation. The best materials to fill in with, must vary with circumstances; and in some degree, depend upon the cost; or the ability of the operator to meet it. Tile, and burnt clay pipes, made for the purpose, and admirably adapted to

genuity and enterprise to any in the world—have not turned their attention to their manufacture. The latter would be preferable for drains in many situations, and the most efficient, at the least cost: not a doubt is entertained, that the demand would not only justify the undertaking, but that the consumption would increase with the supply.

Brick, forms an excellent trunk drain, but is quite

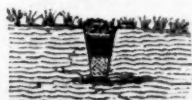
The usual depth is from 30 to 36 inches; two feet might answer in some situations, but the additional depth and cost bear no comparison to the probable advantages to be derived. I have sometimes cut as low as 4 to 4½ feet; but more for the uniformity of the fall, than was otherwise necessary. The opening of the drains, if done when the earth is not too wet, is very much expedited by the use of a very simple and cheap implement, that I have had in use for more than 20 years; it is also used effectively as a *subsoil plough*—to lay off *tight furrows* by

expensive to those with limited means; and unless the bottom is also of brick, or the stream rather strong, it is liable to clog from the working of cray-fish, frogs, &c. If the covering bricks are laid on the side, unless burnt very hard, they are liable to break, and obstruct the free passage of the water.

The same objection, and perhaps in a greater degree, holds with trunk drains constructed with large sized, rough stone; the irregular passage is readily closed, and they are very liable to fall in by a slight abrasion of the sides, or bottom of the ditch. From both causes I have had to open a portion of my drains, when the streams were not constant, or were very light.

The plan I prefer, and which has been practiced for many years, without a single failure, is to throw in promiscuously, 10 to 15 inches (according to the depth of drain) of small stone; from one to two inches diameter would be preferred. Cover them first with flat stone if within reach; if not, with a layer of leaves or straw, and then pack and ram in the subsoil, so as to make it as far as possible, impervious to the surface water; the surface soil having been thrown on one side for the purpose, serves to fill up the last 12 or 14 inches of the drain: it should also be raised a few inches above the surface to allow for settling.

Fig. 3.
END VIEW.



Coarse gravel when readily obtained—and it often can be, where suitable stone does not abound—forms one of the most efficient and durable drains. It is too compact to admit the passage of the little aquatic animals alluded to, (and they are often a serious annoyance in draining) and yet sufficiently open for the free passage of a small stream. It may be asked, how is it to be sifted, and separate the fine gravel and sand? The answer is, with a rough frame of boards, about 3 feet wide and 6 feet long, and sides 6 inches wide, forming part of the frame, set at an angle of about 45°, and supported by a forked stick, with slats nailed an inch apart, horizontally, from top to bottom, will answer perfectly: the fine gravel is just then in order for footways and ornamental walks.

I have often observed immense quantities of this gravel on the margins of creeks and road sides, and so easy of access, that a hand could sift it faster than it could be loaded and carted one-fourth of a mile: and in sections of the country too, where the under-drains would pay liberally; but was told they had no suitable stone to make them with, and the bricks cost too much. When the distance to haul is not too great, it would be both less trouble and less expense to use gravel, than to pick up the small stone (or break the larger ones) in the fields, even where they are abundant.

Having used large quantities of stone to fill around the posts in fencing—and I have lived long enough to prove the plan most decidedly a good one, to add to their durability—it would be difficult now to procure suitable stone for under-drains; was it not my practice to raise every stone, large or small, that comes in contact with the plough. It answers a double purpose, and pays well for the time “in the long run,” as all will find who make the experiment.

In situations where draining is required, and neither stone, brick, gravel, or other suitable material is within reach to construct under-drains, there is no excuse for permitting such land to lie unproductive; for open drains can be made by all; and the only loss is in the ground taken from cultivation, and occupied

by the drains. If the accumulation of water is considerable, either from springs, or from the adjacent slopes, it would generally be best, as previously remarked, to have the main stem, an open drain: and the branches might be covered. In such cases, an obstruction could be easily detected and remedied—indeed the danger of obstruction, is then much diminished.

Under drains constructed of poles laid lengthwise, and of cedar, or of other durable wood, will often prove serviceable for many years; others again, have succeeded very well by using cedar or pine branches to fill in with; or with trunks of plank; they are all much preferable to no drains; but are certainly not advisable if stone is within reach. There are situations, though not very common, where a shallow well or pit, sunk to the under stratum of gravel or sand, and filled with stone, will effectually drain a boggy spot, with but little or no expense of ditching: and although not easily described, the existence of such places may be ascertained by boring with a post augur into the earth, or sinking an iron bar a few feet below the surface; or until it strikes the gravel.

As it is required to furnish an estimate of the expense of the particular plan recommended, it may be remarked, that the cost of draining varies so materially in different sections, owing to the varying nature of the ground, the prices paid for labor, and also the facility of procuring suitable materials with which to construct under drains, that it is very difficult, if not impracticable, to give any data that will prove generally satisfactory, or which will more than approximate to an average cost.

The usual price per rod for an open drain, 2½ feet deep, 3 feet wide at top, and 18 inches at bottom, is from 18 to 25 cents. If intended to be covered, but little more than half this width will answer, and, of course, materially diminish the expense. When not done by my farm hands, I have usually paid from 63 to 75 cents a day, and found. This is generally the most satisfactory to both parties; for, if the digging is good, the employer has the benefit of it; but if otherwise, and which is often the case, the laborer receives a fair equivalent for his time, though able to progress but slowly. I have had six to eight rods of open drain cut in a day; when in other situations, with much stone or roots to remove, one-third the distance was a more laborious task. It is a matter for the farmer alone to determine, by the expense, whether it is to his interest to have open or covered drains.

To answer fully the query, when or where can draining be profitably resorted to? would require much time, and very possibly tire the patience of the reader. Every one is aware, that swampy, marshy lands cannot be cultivated at all without draining; but there are probably hundreds of acres in most of the counties in our State—and few farms, perhaps, without more or less of the same description of soil—that would double the product, if judiciously drained. Wherever the soil, or under stratum, is so retentive of moisture as to delay the operation of ploughing or seeding, in the spring, or to impede the growth of the grain, or grass crops, draining is the appropriate remedy; and it will pay better also, than the heaviest dressing of manure, without it.

Too many persons,—and who are fully aware of the great advantages to be derived from draining—are deterred from the undertaking, by supposing it difficult and complicated; because many do not succeed. Begin at the right end, in the right way, and it is neither one, or the other. It is certainly,

and necessarily, attended with expense; but if once "well done," I have yet to meet with the farmer, who would relinquish his improvements, for the sake of the cost, with the view to expend it for any other purpose whatever.

EDWARD STABLER.

Harewood, Montgomery Co., Md.

ADDRESS

OF

WALTER W. W. BOWIE, Esq.

OF PRINCE GEORGE'S COUNTY, DELIVERED BEFORE THE
AGRICULTURAL SOCIETIES OF TALBOT COUNTY,
On the 17th November, 1848.

Mr. President, and Ladies and Gentlemen:

AGRICULTURE, the most ancient and most ennobling pursuit of mankind, is the interesting theme on which I design to occupy your attention with a few remarks of a practical character.

It would be a work of supererogation, had I the ability and the desire, to detain this enlightened audience with a lengthened history of Agriculture, from its earliest practice by the sons of Adam, down to the present day. Such is not my intention, nor shall I stop to speak of the various modes which have been adopted in different ages, and by different nations. The condition of the Agriculture of a people, is the surest indication of their relative political and moral standing; so that he who is pursuing his course through the world's history, looks to Agriculture as a finger-board, that points to *this* or *that* land which was most prosperous, and whose people were most powerful at different periods of time. To this general remark our own beloved country—our glorious Republic is the only exception, and for reasons the most obvious. In a land like ours, stretching from ocean to ocean, and from the frozen lakes of the north to that sunny land where the rose ceases not to bloom; embracing every variety of climate and soil; every where rich in all the resources of national wealth and national greatness; the fertility of the land almost inexhaustible, yielding most abundantly with little labor—and our people active, industrious beyond parallel with any people that ever lived. Under these fortuitous circumstances, a few could produce sustenance for the many; while a new system of government in which every man should enjoy equal privileges and possess equal rights, was to be established, requiring the time of the more learned and the more talented. While the professions were to be filled, and the arts and sciences were to be introduced, and they opened a field for thousands who had genius and ambition, colleges and seminaries of learning were to be built and put in operation, that the foundations of our political and moral structure which our fathers were erecting might be laid as broad, as deep, and as comprehensive, as would prove commensurate with those grand natural elements that a beneficent God had created in this western clime, to become as it has done already, the admiration and wonder of the civilized world!—"the asylum of the oppressed of every nation"—the only "*land of the free and the home of the brave!*" These facts speak the reason why Agriculture was neglected, and why it was not received and treated as a science, and made to keep pace in importance and dignity of character with the other pursuits and professions that were daily making rapid advances, and which by the brilliancy of their discoveries, and the practical application of them, produced such wonderful results as astonished

ourselves and startled slumbering Europe! Nothing therefore could be more natural than that these pursuits, opening the pathway to fame which all their votaries might easily acquire, should eagerly be sought after by nearly all who had genius, enterprise and ambition; and thus the culture of the earth, on which at least, all others depended, was left to the sluggish care of the drones of the hive, and it became a rule of action with parents to educate all the smarter boys for the professions, and the duller ones were given little or no education, because they were to be farmers, and reading was an injurious draw-back to farmers. However, fortunately for our country and for Agriculture, there was an over stock of great men—every man was, and is now, a politician; the Arts and Sciences were so crowded that men jostled each other; the trades were full; Doctors rode two on a horse, Lawyers in crowds without dockets; as many Parsons as there were sinners; and thus every avenue to wealth and fame was thronged—men of reflection and of talent then turned to the long neglected field of Agriculture. This having been entrusted to the hands of the incompetent, or the unthinking minds of the careless, or the unlettered agents of wealthy gentlemen, who labored, only by working a great deal of ground, to make large crops, so as to support a costly style of living; the lands of the old States were found to be in an impoverished condition; and then emigration to the new lands of the South and West commenced its deteriorating effects upon husbandry—upon society—upon the value of property, and upon all that should be dear to the lover of his native State.

A few men of activity, zeal and talent, commenced the work of reform, by writing treatises, establishing Periodicals—making experiments; and proclaiming the results of experiments as made and tested in other countries. By these means a lively interest was awakened—societies and clubs were formed; a spirit of emulation excited, and great has been the good which has resulted to the cause.

Having thus taken a hasty glance at the past history of Agriculture in our country, and having pointed out a few of the causes which led to the ruinous depression, causing fertility to give place to barrenness and sterility, I am the better prepared thereby to congratulate you, my fellow-farmers, upon the new order of things.

We have waked up from our lethargy; we are proud of our Profession; we read, we study, we no longer view it as the occupation of unthinking labor; we look upon it as a grand science, and we make all other sciences and most of the arts contribute to our progress. Our staple crops have been analyzed and resolved into their elementary constituents, thereby showing of what they are composed, and what the proper food that should be supplied in the soil for their growth. At the expense of the State we have now an able Chemist, whose duty it is to lecture upon the subject of chemistry as applied to Agriculture, and to analyze our lands; we then shall be able to ascertain what are their defects, and to what crops they are best adapted; we can also learn, by knowing the qualities of different manures, which of them and how much of each sort, or of any one kind, may be necessary to apply, for the full production of each crop as it comes in rotation—labor and science has done all this—these once occult mysteries are now laid bare before you, and he who reads can easily comprehend these mighty truths.

Researches in Agricultural Chemistry have disclosed very many valuable fertilizers heretofore un-

known, or if known, not used, because not fully comprehended, and therefore not experimented with sufficiently to prove their value. Gypsum was a few years ago almost the only fertilizer used except the vegetable and animal manures, but now we have composts scientifically prepared as the "Bommer Method," and "Liebig Composition;" and there is Poudrette, Lime, Bone-Dust and Guano—no longer are farmers compelled to use the wooden, or the cumbersome wrought-iron mouldboard ploughs; the one horse-killer; the other, land-skinners. Thanks to the skill and industry of such worthy men as "Minor & Horton," "Prouty & Mears," of the North; but above all, to Maynard & Sinclair, Whitman, Page, Wiley, Woodcock, Davis and others, of Maryland, we have implements that deserve to be called "*Plows*," which go deeper and do the work better than spade-culture.

In nothing has Agriculture advanced so much as in the improvement of that valuable implement, the *Plow*: the "Maryland self-sharpener" for instance, is a close approximation to perfection. At present there is hardly any implement suited to the multifarious wants of the farmer that he may not obtain. Labor-saving machines have been brought to a very high degree of perfection through the genius, skill in execution, and indefatigable industry of our machinists. Indeed, so wonderful is the performance of many of the more intricate and delicate machines now in use as substitutes for human hands, that a looker on feels for a moment, like him who views the play of an automaton, that a mind and a soul are secreted in the instrument. Then with all these appliances to a sure success in his undertakings, what more can the farmer want, but a reliance upon Divine Goodness for suitable seasons, and a proper zeal, application and industry on his own part, regulated by a well ordered system of management. What that system should be, it is not my province now to determine or define; did I possess the capacity, no one man can lay down a system to be invariably followed by another, circumstances, location, soil, crops, distance or propinquity to market, and other causes are equally operative in requiring a change in any system, so as to suit particular persons, or situations. But there are a few general rules that may with safety be observed, and which, I trust, I may be pardoned for here setting forth, having the greater reason for doing so, because they are not mentioned as the result alone of my experience, but as that of a practical and successful farmer who has ever attempted to give rules of conduct to be observed by his fellow farmers. The more important I now proceed to give, to wit;

I. PAY AS YOU GO.

This needs no explanation.

II. *Early rising and early retiring.* By following this rule two great ends are gained—time in the morning, when man and beast are fresh from repose, and capable of doing more in one hour than in two in the heat of the day's toil; and by early retiring the cattle are better attended to, less liable to be neglected, and have longer time to recruit their strength and condition.

III. *When you break the turf always plow deep.*

IV. *Let the maxim on the farm be "obey orders if you break owners."*

Never suffer a positive order to be violated or evaded under any pretext. Decision and promptness will soon enable any man to have this rule established upon such a footing as will ensure constant compliance with the regulation.

V. *Have a place for everything, and everything al-*

ways (except when in use) in its own particular place.

VI. Drain every wet, or watery spot on the farm by open or blind ditches. That distinguished Agriculturist, Col. *Horace Capron*, of Prince George's county, with a mind of nicely discriminating faculties, great practical talent, and possessing views enlarged by the study of Agriculture, as a science, has been able to produce in a brief period thirty six bushels of wheat per acre on hundreds of acres, where five bushels would not have grown before. Land which six years ago was not worth \$10, is now by the best judges valued at \$60. This was done by a judicious and scientific application of manures, and by the aid of *draining*, without which the manures he applied would have been capital thrown away. As the result proved, the crop the first year reimbursed him for both draining and manuring, leaving the land rich which was distressingly poor before it was *drained* and manured. No money is better expended on a farm than in deep and well constructed draining, whether open or covered.

VII. Subsoil all places where a tenacious, stiff substratum lies so near the surface, that the roots of the crop will come in contact with it, and the growth of the plants be thereby impeded.

VIII. Keep all farming implements in order, and use none but the best and none but what are suitable to the work on hand. Better throw away a *new* plow if it does not do the work as is desired, than keep it, till it is worn-out, because it may seem extravagant to buy another while that is *new*. The difference in one crop between the working of a good plow and a bad one, will more than repay the cost of either.

IX. Practice economy in all things, except in adding to the productive qualities of your land. In this, what would seem to be extravagance is in fact economy. Frugality and careful saving are two roads to wealth. An old man, in my county, who started in the world with nothing, and at the age of fifty had acquired \$60,000, rearing in the mean time a large family of children, was one day accosted by a fine old gentleman, who, in truth, was one of nature's noblemen!—with, "How is it, my old friend, that you are free of debt, and own large property, while I set out in life, when you did, with a patrimony worth \$80,000, and have added nothing to it, beside I am much embarrassed with debt?" The reply was, "You sell nothing you can eat, while I eat nothing I can sell; I sell both bacon and corn, but your hogs eat the corn, and your negroes eat the hogs." Here was the grand secret explained in a few emphatic words.

X. Lose no opportunity to collect, manufacture, and use manure. Let nothing be lost which will contribute to the increase of the manure bank. Ditch-banks, weeds, virgin soil from the forests, leaves, mould muck, straw, refuse hay, pine shavings; any and all substances that are manure intrinsically, or which act merely as absorbents of the gases, or salts, on the liquid portions of the accumulating riches of the barn. The manure pile should at least once a week be whitened with plaster. Wait not for particular seasons to haul out manure, but haul it whenever you have the time. An excellent plan is to *top-dress* altogether. One of the great advantages of *top-dressing* is, that you can haul out the manure at any time of the year, and spread it; thus a vast quantity may be hauled out during the year, and the labor of doing so is hardly felt, or the time noticed. Every foot of land from the turf should be manured the same year, or have been the year pre-

vious. If your folding pens, your barn-yards, compost heaps, &c., afforded not manure enough for twenty-one cart loads per acre that is annually worked on "fallow," you should purchase of that fertilizer, which, in your practical judgment, would seem best adapted to the soil and the particular crop, a sufficient quantity to finish the ground left unmanured. By this process you manure your whole farm over once in three or four years, as your farming system may be. Whenever practicable I would strongly recommend the "soiling system" for many reasons, but particularly because much more manure can be manufactured and more stock can be well fed from half the land that would be required for pasture.

XI. Every crop should be kept clean and worked. No weeds or grass permitted to contest the rights of the soil with it. Remember that plants, like our sweet-hearts, are jealous of intruders, and will have all or nothing, the whole heart or none, and it is this true and only proper doctrine.

XII. Never suffer a field to lie naked. After a field has been cultivated in corn or tobacco, and no grain sown upon it, be sure to sow it in clover, unless the woolly headed clover grow luxuriantly. The surest method of securing a good set of clover is to sow it in the winter or early spring on land where there is no grain.

Let farmers attend to these Rules, strictly as cardinal points, let them study Agriculture as a Science, and attend a Farmer's Club regularly as a school, be active members of a County or State Agricultural Association, and there is but little doubt, that they will speedily become independent, if not wealthy.

Associations like the one over which you preside, Mr. President, are productive of great profit as well as pleasure to the farming community. It is always by associations and conventions, that any important objects, or great improvements of a political, moral, commercial or Agricultural character, are accomplished. This is done by the assembling together of those whose whole hearts are alive to the work on hand; by concert of action, exchange of ideas; comparison of the theories and practices of each other; and by concentrating the intelligence and practical skill of the many. In this way, great are the results of these Agricultural assemblages, which may be compared to the sun-glass that brings many beams to one focus. A single sunbeam is inoperative, but many brought to bear on one point might by the power of concentration, set the world on fire. The opinions of one man are comparatively valueless, but by concentrating the opinions and the experience of many, we may kindle a blaze, the effulgent revivifying rays of which will be shed abroad over the Agricultural world, and ripen the fruits of our labor into an abundant harvest.

What like Associations have done in other lands, why should they not do for us? In England an acre of land has been made to yield eighty bushels of wheat—are not the lands of America as capable of great production as the land of the old world? A striking instance of the importance to farmers of a correct chemical and geological survey of their lands, is given by Professor Wines, when he says that Monmouth county in New Jersey was one of the very poorest in the State, until it was geologically surveyed, when valuable marl was discovered, and the land in five years rose from five or ten to fifty and one hundred dollars per acre. Now is there not within the bosom of your land, a large deposit of this fertilizer? Surely, for many of you have availed

yourselves of it, with eminent success; why not then continue, and make a business of raising and spreading marl? What it has done for Monmouth county, it will do for Talbot. Let it not be said that Jersey-men have more science, or more energy than Marylanders. This is the sort of generous rivalry that should exist, and for the want of it, we are far behind other people in Agriculture—as a people we are unequalled in War, Politics, Science, and all utilitarian pursuits except in farming. Why is it so? Because, heretofore we have despised Book-farming—and have not banded together as the English husbandmen. They met together, side by side, and then they could see both beauties and defects; while we kept apart, and each wedded to his own opinions, reckoned each one for himself that his hog was the best, his sheep the largest, and his ox the fattest ever seen, because he "had never seen any that came up to his." If the English tenantry find it to their interest annually to expend more money in manure than their heavy rents amount to, should not the freemen of America, who are possessors of the soil, and whose children are their successors and inheritors, feel an increased duty to leave their homestead improved instead of deteriorated? I trust that such is the sentiment which now pervades generally with American farmers enjoying as they do the full light which modern Science has shed over their pursuit, and which has, as it were, remodelled the domestic animal—"with all the incitements possessed by the American Farmer, and all the advantages within his reach—it cannot be doubted that they will repair the mischiefs which slovenly cultivation has produced—will soon restore the lands to primeval fertility capable of producing double the amount of the present crops, if not crops rivaling those of British husbandry." As an indication of what can, and an earnest of what will be done, look at your own Association, and view the present scene. What American Patriot can look upon the spectacle here presented without emotions of gratified pride and pleasure, mingled with sentiments of gratitude to his creator, that his birthright has been cast in this land of liberty, "flowing with milk and honey." The indisputable proof here offered of the high perfection to which the mechanic arts have been brought, by the ingenuity, science and energy of our own Artizans; the large collection of stock of every description, with the magnificent display of vegetable products and of fruits and flowers—evidences of the talent, industry and wisdom of those who are not ashamed of being called farmers, and at the same time, evincing the inexhaustible resources of our country; and here too, now that the summer is ended and the harvest past, I see a concourse of the open-hearted, intelligent and chivalrous yeomanry of the Eastern Shore of Maryland, assembled to hold their usual Agricultural Festival, and they come attended by an array of female loveliness, because woman ever foremost in good works, lends to scenes like this the light of her countenance, for

"Without the smile from partial beauty won,
Oh! what were man? a world without a sun."

I congratulate you, Mr. President, and the whole county upon the spirit which gives birth to occasions like the present, for they elevate us as a people in every respect, but especially because they make us to know ourselves—to feel our importance and our power, which sooner or later must turn to great accounts.

Connected with Agriculture are a few other subjects on which, did time permit, I should delight to

dwelt, but whilst I must refrain from a long dissertation, I cannot pass them over without a few words, especially—as the fairer, and shall I say better, portion of my audience are particularly interested in them. I allude to *Horticulture, Floriculture, and Gardening* in general. It is over these particular branches, that woman seems peculiarly fitted to preside. Her taste—her exquisite talent for harmony of arrangement—neatness—order, and all the requisites of that beauty which is for effect, and in truth is always effective,—all combined, fit her pre-eminently for the control of these adjuncts to a well regulated system of Husbandry. As the English Poet most beautifully says of the Garden of Paradise,

“The world was sad! the garden was a wild!

And man, the hermit, sigh’d, ‘till woman smiled.”

Where is her power and influence—her taste so successfully exerted, and which universally commands praise, as when employed in the decoration of the grounds about her “home,” in the culture, and preservation of superior fruits—and the culture of fine vegetables and the serving the same upon the table after the first most approved mode? My fair young friends will not then deem it impertinent in me when I exhort them to be handmaids of Flora while their brothers and lovers are followers of Ceres. And I would beg them, if they wish the hue of health—the unspeakable blessing of a good constitution, that they make their morning orisons ‘ere the lark hymns his matin song—gather the bouquets for the day ‘ere the pearly dew has passed from the rose leaf, and see that the day’s work on the flower border is done before the ringing of the breakfast bell. If so, unlike the town belle, who, after the night’s dissipation in the heated ball room, or at the crowded Opera, only languishing, lives through the day—they will wear the happy smile of contentment and peace, and the color of their cheeks will then truly be that of the “rose leaf crushed on ivory.” The rest of the day may be spent in other domestic duties, and in reading, music, needle work and the entertainment of friends. Let them bear in mind that, seven hundred years ago, the high born dames of England “considered it no infringement on the dignity of their station to attend to the profitable concerns of the poultry yard and the dairy. The Countess of Chester, Lady Constance, though wife of Hugh Lupus, the King’s first cousin, kept a herd of swine, and made good Cheshire cheeses, three of which she presented to the Archbishop of Canterbury.” And at the present day, *Victoria* has one of the best arranged and most profitable Poultry-houses to be found in her great kingdom. As to ornamental needle work, we have had sufficient proofs of the proficiency in that department of female accomplishments, to prevent our offering a word of exhortation to induce any further effort toward excellence, for what has here been exhibited shows that the women of America are as skilful in delicate stitchery, and in portraying youthful delineations, as the royal maids of Matilda of Flanders, who, in the celebrated Bayeux tapestry, gave a full pictorial history of the conquest of England by her royal spouse Duke William; and which, for magnitude and beauty, “is beyond all competition the most wonderful achievement in the gentle craft of needle work that ever was executed by fair and royal hands;” nor do I mean it as a stimulant to farther exertion on the part of those I address, when, in the language of that interesting biographer, Miss Strickland, I may add that, in that age, needle work was one of the most desirable accomplishments that princesses and

ladies of rank could possess—nor with any such motive do I quote the language of that old chronicler, Malmesbury, who says “that the proficiency of the four sisters of King Athelstane, in spinning, weaving and embroidery, procured these royal spinsters the addresses of the greatest princes in Europe.” I only mean to say that such accomplishments ought to have great weight with the gentlemen of these United States. But it is to the study of Botany and the culture of fruits, trees, shrubs and flowers that I wish more particularly to call the minds of the young ladies who honor me with a hearing. Such pursuits afford instruction and amusement, and contribute to do good. It makes one more acquainted with nature, and gently leads their souls from nature to look to “nature’s God.” It tells us that all things earthly are within the reach of man—that flowers and trees are creatures as much of climate and culture as man is of habit and education, for the rich and luscious Peach is only the improved and cultivated bitter almond. The rose, of which there are now thousands of varieties, has been produced solely from the common wild briar. By hybridising and other means, vegetables have been made to produce new and superior varieties, and grown to enormous size, as, for instance, squashes have reached the surprising weight of 200 lbs. Independent of these important results, is there anything more calculated to excite pleasurable feelings in the mind of a visitor to a house, or a casual stranger as he journeys on his way, than seeing a cottage door embowered with vines and odoriferous flowers, and the lawn surrounded by a neatly trimmed hedge, with here and there a parterre gay and gladsome with the bright colored annuals and the brilliant perennials? What has made the rural scenery of England so distinguished by travellers, but the love of her people for old trees, and for lawns, and flowers, and their celebrated Hawthorn hedges.

I fear I weary your patience; but before I take my leave, Mr. President, allow me, for the purpose of mutual gratulation, to take a hasty glance at our present proud condition as farmers of Maryland. We live under the happiest form of domestic and civil institutions—our social and moral condition most enviable!—our people in a high degree enterprising, and intelligent—education fostered, for the School-master is abroad, and none so poor but may freely bask in the full light of his instruction—our climate agreeable and healthy, while the soil is easily rendered productive, being naturally fertile. Our State rich in all the natural elements of wealth and power; her finances resting on a flourishing Agriculture, where Napoleon said to George the Third of England, “if they were founded, could never be destroyed”—our territory almost divided in twain by that beautiful inland sea—the *Chesapeake*—furnishing exhaustless supplies of wholesome food, in fish and fowl, and delicacies that would have graced the table of the most luxurious Emperor that ever maddened Rome with extravagant folly and wild dissipation; our South Western boundary being the noble Potomac—the great artery that leads to the heart of the Nation—the Capital of the Union!—while our mountains furnish a never-failing supply of coal, iron, lead and other valuable minerals; the vallies and plains are grazed by innumerable flocks and herds; the whole State is intersected with Rail Roads and Canals, beside the many navigable water courses, all of which afford easy and convenient mediums of transporting our products and merchantable wares, to and from the great city of Baltimore,

destined, 'ere long, to become the Rome of Maryland and one of the greatest marts in the world!—What more can we want—what more could we desire? Let us then so act and live in future, by practising economy, enriching the land, and adorning our homesteads with living, lasting memorials of our industry, that our sons shall no longer leave the home endeared by the recollections of childhood, and from sight of the old willows, that so gracefully weep over the graves of their fathers, fly as though a pestilence and famine pervaded the land. Let us so cherish the inheritance we possess, and so improve our present opportunities, that our children's children, as they repose beneath the vine and the shade tree of our planting, shall gratefully cluster their blessings about our memories.

WORK FOR MARCH.

March is one of those months in which much labor has to be performed, and in which time is emphatically the equivalent of money, and should, therefore, be husbanded with as much care by the agriculturist, as does a miser his golden hoard. But with all the claims it brings with it, by proper disposition and arrangement, the farmer and planter need never be hurried, though each should make it a point of duty to always be busy. He who suffers himself to be hurried, is very apt to do what he is engaged in, slightly, while he who is steadfast, persevering and busy, is certain to have what he undertakes, well and thoroughly executed—to finish what he begins before engaging in anything else.—By such course he prepares himself so to dispose of his force, as to produce the most profitable results. For an agriculturist to be enabled to place himself in a position at once so desirable, and so advantageous, it is only necessary that his plans of operation should be adopted with care and judgment—that he digest them well—and when thus adopted and thus digested, that he rigidly carry them into effect. Nothing, except under the most urgent circumstances, should be permitted to interrupt their execution,—and as they should be seasonably laid, so should they be carried out in good time. Delays in every business is fraught with danger, but in none are they more so than in that of cultivating the earth. A week, or even a few days behind time, in seeding, not unfrequently endangers the safety of a crop, besides which, he who starts behind his time, is scarcely ever able to catch up with his work, and is, therefore, stemming against the current throughout the season.

With these few introductory remarks, we will direct attention to some of the many things that should claim attention

ON THE FARM.

Hauling-out Manure.—As the time has arrived when every agriculturist should address himself to this laborious job, we will claim attention while we offer a few words of advice. As it should be an object with every one in improving his lands, to so

distribute his fertilizers, be they what they may, as to produce an equality in the improvement of the soils to which they may be applied, and that can only be effected, where the manure is alike in quality, and pains be taken to so spread it, as that every portion of the field shall receive as near the same quantity as possible. To ensure these results, it is necessary, *first*, that the manure from the barn and stable yards, be thoroughly mixed together before being hauled out, and, *secondly*, that care be observed to have the heaps dropt from the wagons and carts, in as equal quantities and distances as possible. By paying attention in these particulars, the mortification may, in a great measure, be saved, of seeing the grain grow with unequal luxuriance in different parts of the same field, and something like an equality in product may be secured. If it should not be convenient or advisable, to plow in the manure at the time of its being carted out, means should be taken to prevent loss by the evaporation of the fertilizing gases. There are two ways to effect this: the one is by mixing plaster, or some other fixer, with the manure before removing it from its place of depot, and the other, by covering each pile with the surrounding earth at the time of throwing it out of the cart. This will cost something, and require additional labor, but both the one and the other will be refunded in the increased value imparted to the manure. Charcoal will answer as well as plaster, as a conservator of the ammoniacal gases—so will charred peat,—and, to a certain extent, salt marsh mud would subserve the same purpose. We mention these several substances, in order that a wider field for action may be unfolded to the farmer. A word or two as to the quantities of the enumerated fixers. If Plaster should be used, 1 bushel to every 20 double-horse-cart loads will be about the right quantity; if Charcoal, 20 bushels to the same quantity of manure, and if marsh mud be used, about one-third in quantity should be the relation which it should bear to that of the manure.

Old Fields.—If you have eye-sores of this kind, you may convert them into tolerably fair pastures, by thoroughly harrowing them, and sowing on each acre 10 bushels of lime, or 5 of ashes and 5 of lime, provided you keep the stock off, until the grass gets a start.

Meadows.—Should your meadow be tight bound, harrow it well, sow thereon a gallon of timothy seed, per acre, roll the seed in, and then spread 5 or 10 bushels of lime, per acre, thereon.

Preparation and Ploughing of Corn Ground.—Manure heavily, plough deep, and thoroughly pulverize your corn ground with the harrow and roller. These are the secrets in the preparation of the soil for this important crop. If your land has not been previously limed, or marled, you should apply one or the other of these substances, just before harrowing your ground. If the ground is thin, 25 bushels to the acre will be enough lime, or 100 bushels of marl—if in tolerable heart you may double these quantities—if stiff land, rich in organic or vegetable mat-

ter, you may put on 100 bushels of lime, or 300 bushels of marl. While upon this subject, we will repeat what we have often said before, that *oyster-shell lime*, in our humble opinion, is as good, pound for pound, if not better, than the best stone lime, for all agricultural purposes—and that he who may have *marl* on his estate, needs no better substitute than it for lime. Marl is the better of having the advantage of a winter's frost and summer's sun, before being used.

Grain Fields.—If your grain fields should shew signs of winter killing, harrow and roll them so soon as the frost may be out of the ground. Don't be afraid of dragging the wheat plants out of the ground—what the harrow may drag up will be returned by the roller, and from every joint pressed into the earth by the latter implement a new plant will arise. Should you, however, be too timid to use the harrow, don't fail to apply the roller. Should you test its value once you will ever after resort to it as the *panacea* for a winter-killed wheat field.

Barley.—This grain should be put in as soon as the ground is in a condition to be thoroughly prepared—that is so soon as the frost is out of the ground. It delights in deep loams, but they must be in good heart—poor lands do not suit Barley—in good soils it will prove a profitable crop, and much more should be grown than is. Clover seed may be sown with Barley. Sow three bushels of seed to the acre.

Oats.—This is a grain universally grown, but unfortunately for its product, is too often consigned to the most poverty-stricken field on the place—and thus sown, if it does not produce well, it is decried as an unprofitable crop to raise, whereas, the fault of its failure was, in expecting it to grow where it could find nothing to eat. Give it the advantage of a generous soil, and it will reward the culturist well for his liberality. We have known 2400 bushels to be grown on a 40 acre field—but this field had been limed and ashed, and had stood two years in clover—they were grown on a clover-ley. To grow oats or anything else on a poor soil, is a ruinous business—time and labor lost.

The sooner oats are got in the ground, the better chance is there of their yielding grain—therefore put your ground in order as soon as it can be put in good order—plough deeply, harrow well, sow 2 bushels of seed to the acre, harrow them in, and roll the ground after seeding them. If your ground is thin, we would advise you to make a compost of 2 bushels of bone-dust, 2 bushels of ashes, and 1 of salt, per acre, sow it broadcast, and harrow it in with the seed.—Thus treated, you may calculate on a pretty fair crop of oats. Should you seed to clover, you must sow 10 bushels of lime, per acre, upon the stubble soon after cutting the oats, and to plaster the field early the succeeding spring.

Planting Corn.—To prescribe a day, for planting corn in a country like our's, would, indeed, be an empirical affair—the best rule is that of aboriginal origin—to plant when the oak-leaf is as big as the squirrel's ear; but this we will say, that we are the advocate of early planting—that we would always seize the earliest period after the frost was out of the ground to prepare the ground—that, unless the land was rich, we would never plant without manuring, and that heavily; as all experience teaches us, that the corn plant is a gross feeder—there are grains that may be fed to repletion, but we doubt whether corn can be—and we apprehend that, in all composts prepared for its culture, there should

be some substance yielding phosphoric acid, the base of bone-earth. For a list of the substances wherein to find it see our article upon the use of bones, in another part of this day's journal.

Orchards.—These should be overlooked, all dead limbs carefully cut off, close in, the surface should be made smooth, and the wound dressed with a plaster of soft cow dung, lime and clay in equal parts, or be treated to a mixture composed as follows:—take 1 lb. pitch, 1 lb. of Rosin, $\frac{1}{2}$ lb. of Beeswax, $\frac{1}{2}$ lb. turpentine, melt and mix the whole together, spread it evenly on thick paper, or cotton cloth, and apply it to the wound.

If the soil of your orchard is not fertile, and you cannot afford, or have not the time to manure the whole, spread broadcast around each tree a bushel of compost, made as follows—take two parts of marsh mud, or mould from the woods, ten bushels of lime and 2 of bones to every 20 bushels of either of the two first named substances, mix the whole thoroughly together and after applying it, harrow it in well, taking care not to bark the trees in doing so. This done, paint the bodies of your trees with a mixture composed in the proportion of 1 lb. sulphur, 1 quart salt, and 1 gallon of soft soap. Should the trees be mossy, the moss should be previously rubbed off with a hard brush. Fruit trees, like everything else that grows, require to be fed and kindly treated. Good fruit should not be expected from poor soil.

Planting-out young Orchards.—So soon as the earth can be got into good order is the time to set out your young trees. The soil should have had the advantage of a ploughed crop last season, and to have been liberally manured. The holes should be made larger than is necessary to enable you to spread out the roots—the holes should be much deeper than you mean to place the trees, which should be put in with some fertilizing compost—such an one will answer as we have recommended for old trees.

Fences.—These should be looked to and thoroughly repaired. Do not entrust their examination to any eyes but your own; *superintend, personally*, those engaged in their repair. If you do these things you may be certain that your fences will be placed in a condition to resist the attempts of your own and neighbor's stock; but if you leave them to others to do for you, the chances are, that the repairs will be done but indifferently well.

Bars.—Are the ingress and egress to your fields through bars? If they are, substitute your bars by gates—believe us, that the time occupied in taking down and putting up a set of bars is worth more in a year than a good substantial gate would come to, to say nothing of the difference in appearance.

Milch Cows.—Bestow additional care to these—see that, in addition to their fodder or hay, they get something in the shape of roots, bran, or meal, made into slops. This is a trying month upon them, and it is, therefore, essential that they be treated with increased kindness. And while we are upon this subject we would ask to be permitted to entreat you, to make up your mind to put in a few acres of roots this spring for food for them next winter.

Early Potatoes.—The moment the ground can be ploughed and put in order, will be the best time to plant your early potatoes.

Cattle generally, working as well as store, should be well fed and cared for this month.

Working Horses and Mules.—See that these ani-

imals are well fed, curried twice a day, regularly watered before each meal, bedded at night, and salted twice a week.

Tobacco Beds.—These should receive constant attention.

Sheep.—Let those that are in young receive in addition to their long food, a gill of meal per day, each—be carefully supplied with salt, and regularly watered.

Mixture for Stock generally.—Equal parts of lime, salt and ashes mixed together, is better for stock of all kinds than salt alone, and as the same quantity will answer, it is much cheaper. We should prefer oyster shell, to stone lime.

Subsoil Ploughing.—This means of preparing the earth as pasture for plants we feel satisfied is best, and should therefore, be pleased to see it come into fashion. It would cost more, but we feel certain than any *sound soil*, that is, a *soil which is not wet*, when subsoiled, would yield 25 to 30 per cent more than when ploughed in the ordinary way. The plants would have deeper and better pasture, while the earth would stand drought better,—so also would the waters deposited by heavy rains pass off sooner, and be less likely to interfere with the healthful growth of the plants.

Tools and Implements.—Is your supply sufficient to enable you to do all your work well and in time? If not supply yourself with whatever you may need. If those you have are not in good order, have them repaired without another day's delay. Have you a house to keep them in? If not forthwith build one.

Poultry Houses.—Have these cleaned out thoroughly, and white-washed.

Out-Buildings, and Garden and Yard Fences.—These should all be white-washed.

Shade Trees and Shrubby.—If you have none of these sources of comfort and pleasure around your dwelling, plant them at once—your example will incite your neighbors to follow in your footsteps—besides, you will love your home better for the improvement.

Cattle Pasturing.—Don't tax your neighbor with the pasturing of your cattle, but fence in a pasture for them to find a living in.

In closing our month's conversation, we say, *God speed to all.*

ADVANTAGES OF CHEMICAL ANALYSIS APPLIED TO AGRICULTURE.

In order to give as much information as possible to the agricultural community on a subject to which its attention is at this time particularly directed, I will briefly state a few of the many uses of Analytical Chemistry in its application to the culture and improvement of the soil.

The word analysis means nothing more nor less than the separation of one substance from another; the prefix *chemical* shows that this is effected by chemical *re-agents*—substances which are employed to determine the presence of other bodies by the production of a particular appearance which attends the mutual action of the *re-agent* and the other substance.

A chemical analysis may be either *Qualitative*, that is, confined to the detection of the *mere presence* of the different ingredients comprising a substance; or, *Quantitative*, when we not only detect the *presence* of these different ingredients, but also determine their precise quantity. It also may be *general*, when we estimate all the component parts of the body under

examination, or special when our attention is directed to only one component part, specially valuable to some use to which it may be applied. Thus, in the analysis of "shell marl," whose value depends on the quantity of carbonate (air slaked) lime, which it may contain, when we demonstrate the presence of lime, we have performed a special qualitative analysis—when we go further, separate it from its admixture with other matters, such as sand, clay, iron, &c., and ascertain its exact weight, a special qualitative analysis has then been performed.

After the quantitative estimate of one ingredient, we may still go on and ascertain all of the other ingredients of a specimen under examination, estimating quantitatively, that is, determining the exact quantity of substances which may be valuable, and qualitatively, that is, determining the mere presence of those which possess no peculiar interest.

The great advantage of chemical analysis applied to agriculture, consists in rendering the improvement of poor soils cheap and certain, and in giving correct rules for the cultivation of those which may be fertile. This latter proposition I shall demonstrate in some future number of the American Farmer.

It renders the improvement *cheap*, because, with the knowledge which it affords, we apply only what the soil may be deficient in; and certain, because by knowing what constitutes a fertile soil, we can always make its like by affording to one that is barren the constituents present in that which is fertile. By affording a knowledge to those who cultivate the soil of what it not only contains, but also the exact quantity of the different ingredients composing it, those which are in too small proportion can be increased, and those which are absent can be supplied. Now, as the fertility of soils depend *not on the presence of any one substance necessary to the growth of plants, but upon a proper proportion of them all*; (for a soil may be barren, having but any one of the necessary ingredients even in large proportion,) one may in striving to improve a poor soil without the aid of analytical chemistry, be applying a substance which already may exist in sufficient quantity, producing no improvement, ending in loss of money, sacrifice of time, and disgust for agricultural operations. Chemical analysis will discover for those wishing to improve their soils, not only the *presence*, but the *exact quantity* of fertilizing substances which may exist in them—and, also, prove the absence of those which are not present, giving a *certain, sure and infallible* law for the application of manures, teaching the true economy of farming—to apply what is needed, to withhold what may not be wanted, removing the uncertainty which attends its operations, and claiming a precision for its results equal to its individual value, and commensurate with its national importance. It is owing to the different compositions of different soils that we see so much discrepancy of opinion amongst honest, sensible, and practical men, in regard to the value of certain manures; who using the *same* substance, but on *different* soils, obtain very different results—some praising very highly a particular manure, and others condemning it as useless. Familiar examples are within the knowledge of every one, as to the opinions, written and spoken, for and against the use of *Lime*, both pure and magnesian, *bone-dust*, *guano*, *poudrette*, and even *ashes*. The opinions of each side are, doubtless, founded on observation and based on experience; observation however of no value, and experience worthless to the community at large, because, the *great fact* the com-

position of the soil to which these manures were applied was not known. They acted well where their elements were deficient or entirely absent, and badly where they already existed in sufficient quantity,—so the terms fertilizers, manures, &c. have only a relative meaning, the substances so called being such only when applied where they were previously deficient, or where they were entirely absent. Let us elucidate this by a familiar example; in Kent, Queen Ann, Talbot, and many other counties of the Eastern Shore, a large proportion of the soil, easily recognized by its physical appearance, contains an abundance of magnesia, and scarcely a trace of lime; other portions are deficient in both lime and magnesia. Since both of these substances are necessary to constitute a fertile soil, it is very plain that a magnesian lime will act much better than that which contains no magnesia, in a soil deficient in both, and that its benefits to a magnesian soil will be lessened, in exact ratio to the quantity of magnesia which it may contain: that is to say, when one applies a lime containing say 30 per cent. of magnesia, to a soil which already contains it, in sufficient abundance, he throws away 30 per cent. of the money which he pays for his lime; but the loss does not stop here, the cost of hauling and applying a worthless article, and the increase of crops which would have resulted from the application of a pure lime, not realized in the present instance, must also enter into the calculation. Two persons thus applying the same lime, but upon different soils, both too, judging from experience, will have very different opinions as to its value, a value not inherent in the lime, but depending on the constitution of the soil to which it may be applied. To the first mentioned soil, it is evident, that the benefit derived from lime will be in proportion to its freedom from magnesia; to the second, within certain limits, to the quantity present of this substance.

Hitherto both varieties of lime have been indiscriminately used with loss which some have felt, and all can understand. Now that the exact composition of these lands has been determined, economy in the application of lime and certain remuneration for its expense must be the result. The knowledge of what is best suited for soils may, it is true, be obtained by experience, imperfectly, however, under the most favorable circumstances, at the cost of money, labor, and time; but all men have not money—some cannot obtain the labor, others have not the time, and capitalists will not invest money in agricultural operations, whose returns depend on so many uncertainties, when they can select other branches of industry which have ensured profitable returns by the aid of science.

That no knowledge of the art of agriculture, however perfect, no zeal however ardent, can certainly direct one in the cheapest mode of improving "worn-out lands," I will show in the next number of the American Farmer, by a report of the analysis of two varieties of the improved and unimproved soil of Col. H. Capron's Laurel Farm. The well earned reputation of this gentleman in all subjects pertaining to agricultural matters, is a sufficient guaranty that he used the best and most profitable mode accessible to him, yet the aid of Chemical Analysis would have saved him many hundred dollars in the improvement of his land.

I have in the above avoided as much as possible all technical expressions, unintelligible to the great mass of your readers, and shall follow the same rule in all of my subsequent communications, remember-

ing that I write for the benefit of plain practical farmers who contribute so much to the wealth of the country, and most unjustly receive so little in return, upon whom depend our present welfare and future prosperity, whose labor support the country in peace, and whose valor in war has ever been its surest defence.

JAMES HIGGINS, M. D.

Easton, Talbot Co., Md., Jan. 23, 1849.

DR. HIGGINS' COMMUNICATION.

Coinciding as we do in the force, propriety, and truthfulness, of the remarks of Dr. Higgins, the State Chemist, generally, we must be permitted to dissent from the opinion he expresses in his communication, that Col. Horace Capron could have improved his Laurel estate at less expense had he possessed the advantage of an analysis of his soil. We concede to the fullest extent the value of the knowledge to be derived from such process, in enlightening one as to the wants of his land. We are willing to believe as a general proposition, that, with such knowledge one could, with greater certainty, supply its specific deficiencies, and replace more advishly, what had been abstracted by culture—and yet we are indisposed to believe, that, under the circumstances in which our friend Col. C. found his farm, he could have saved much, if anything, however nice and accurate the analyses of its soils had been made, either as regards their qualitative or quantitative constituent elements. For, in the condition in which he found his fields, he had every thing to replace. Long and improvident culture had robbed them of every vestige of fertility—had deprived them alike of every thing that partook of the character of the nutritive or mineral food of plants—poverty and sedge-grasses were struggling with indomitable energy for their livelihoods, and presented the most unerring evidences, that, arduous as had been their struggles, subsistence was held by the most precarious tenures on the fields on which they gleaned—and that tobacco and corn had left them a most wretched pasture to batten on.

The task which Col. Capron undertook was a herculean one—it was one from which any one less courageous—less chivalric than he—would have recoiled in utter hopelessness and despair; but armed with a spirit that never quails—that never succumbs to difficulties—and animated by the noble purpose which he had in view, he determined, in his own person, to demonstrate, that barrenness was a disease that could be cured,—that the productive powers of his land could be restored. And the result of his labors shew, that he did not "calculate without his host;" for, in less than seven years, he has improved as many hundred acres, which previously would not repay the cost of cultivation, so as that now, in point of fertility and productive capacity, they are equal to any land in the country,—and this he has achieved at a cost which leaves him a profit. Now what more could be desired? He saw that he had every thing to provide, and his correct and discriminating judgment suggested the substances needed, which he so apportioned in quantities and kinds, as to infuse new life into the earth, and clothe it with verdure, and impart to it fruitfulness, with the prospect of continuance—and, assuredly, professors Johnston and Playfair could not have done more!

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SAMUEL SANDS, Publisher,

At the State Agricultural Society Rooms, No. 128 Baltimore st. over the "American Office," 5th door from North-st.

STATE AGRICULTURAL SOCIETY ROOMS.

As intimated in the letter of the Hon. Charles B. Calvert, published in our last number, calling the late quarterly meeting of the "Managers of the Maryland State Agricultural Society," and as authorised by a resolution passed at that meeting, a suite of rooms have been taken over the *American Office*, No. 128, Baltimore street, 5th door west of North street. These apartments are splendid, beautifully located, and well adapted for the purpose. "Farmers and Planters of the country who frequent the City of Baltimore, may therein at all times, meet one another and discuss the various subjects of professional interest, and procure the best information in relation" to matters connected with their occupations.

The office of the AMERICAN FARMER is removed to the same building, where persons having business with its proprietor, will please call or address their communications.

Our engraving will designate the building, which has been recently erected on the great thoroughfare of our city, by the Editors of the *American*.

PRIZE ESSAY ON INSECTS.—Our columns are graced to-day by a Prize Essay, by *Thomas S. Pleasants*, of Petersburg, Va., a writer of much celebrity. As a horticulturist he has few equals. For the essay in question, Mr. P. has been awarded a prize by the Maryland State Agricultural Society, valued at \$20. The fine moral, religious, and philanthropic feeling and sentiment, which parts of the paper breathes—its humane appeal in behalf of the preservation of birds, the proofs of their usefulness, and the historical account of insects which it discloses, are all full of interest—so also are the remarks made, and facts adduced, in proof of the benefits arising from the early sowing of wheat. The theory he assumes in regard to the cause of the rust in wheat, we cannot, however, subscribe to, as we believe Mr. P. has fallen into a very common error, that of mistaking effect for cause. We make this remark with reluctance, and hope he will not receive it in an invidious spirit, for in all sincerity we can assure him, that we entertain for him the warmest regard, and look upon his essay as a beautiful production, chaste and simple in its style, and the more learned, because, it conveys facts, imparts knowledge, and elaborates ideas, without burying their meaning beneath a labyrinth of unintelligible words.

PRIZE ESSAY ON DRAINING.—The Prize Essay on Draining, by *Edward Stabler*, which will be found in another page, and to which was awarded the Premium of the Maryland State Agricultural Society, will commend itself to the intelligent reader by the simplicity of its style, the practical good sense which distinguishes it, as well as by the importance of the subject upon which it treats.

STATE AGRICULTURAL SOCIETY.—The quarterly meeting of the Board of Managers, held on the 7th ult., was one of much interest. The Report of the Committee on Essays was read and adopted. On opening the seals, it was found that the essay on Insects, &c., to which was awarded the prize, was

from the pen of *Thos. S. Pleasants*, of Virginia; and the three essays on Draining, for which the committee recommended prizes, were by Mr. *Edu'd Stabler*, of Montgomery Co., Md., Hon. *Willoughby Newton*, of Virginia, and *John Wilkinson, Esq.*, of Mt. Airy Institute. For reasons set forth in the Report of the Committee, the award was made to the first named gentleman, the Society having offered but one prize, and the limited means at the disposal of the Board not rendering it advisable to carry out the recommendation of the Committee. The essays which received the prizes will be found in this number of our paper, and will, no doubt, be acknowledged as among the most valuable which have ever graced our columns. The others will appear hereafter.

The appointment of the Committee on the subject of the transportation of manures, &c. by the Internal Improvement Companies, is an important measure, and of deep interest to the agricultural community.

The letters from the members of the National Legislature breathed the right spirit, and give assurance that our representatives will not be found wanting in their duty to the great interest of our country. Our limits, at present, will not allow us to publish these letters entire; but we shall, hereafter, take occasion to lay the substance of their contents before our readers.

The Committee appointed to prepare suitable rooms for the accommodation of the members of the Society, it will be seen, has rented, for an Agricultural Exchange, the commodious hall in the building recently erected by the editors of the *American*, the architectural beauty of which is quite an ornament to our city, and, situated as it is, in the very central square, and on the great thoroughfare, will be found of easy access to our friends from the country.—[The Board having also engaged an office, adjoining the Hall, for the conductor of the "AMERICAN FARMER," our office is removed to the same; and we shall be happy to receive the visits of our friends at our new quarters.] Here the farmers, from all quarters of our State, will find comfortable accommodations, open at all hours, for the visits of themselves and friends, where they will be enabled to become acquainted with each other, and confer upon matters of general interest to their profession. It is intended to supply the hall with agricultural publications and a library, and to exhibit the cards of those engaged in the manufacture of implements or machinery required by the farmers, as well as of other persons having any thing of interest to present to their their consideration.

The Committee to procure a permanent site for the annual Exhibitions will, in due time, make a report to the Board.

Gen. Chapman's Address before the Charles Co. Society will be published in our next.

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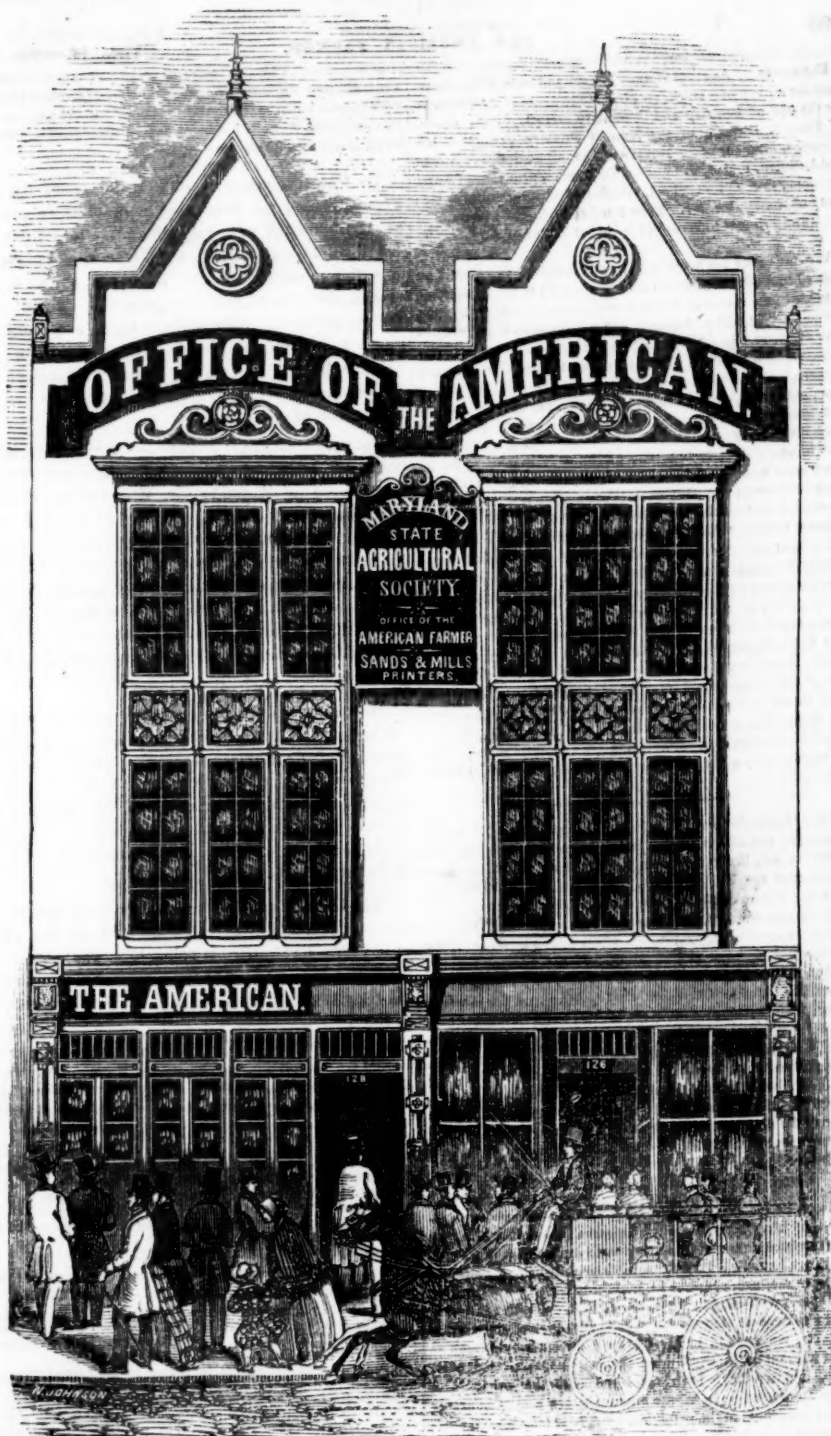
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ELEMENTS OF AGRICULTURE.—We are indebted to the translator for a copy of a work, entitled "Elements of Agriculture: for the use of Primary and Secondary Schools, by L. Bentz, of France, Director of the Normal Primary School of the Meurthe, Member of the Royal and Central Societies of Nancy and Aurillac, and A. J. Chretien De Rosville, professor of Rural Economy in the same school, member of the Agricultural Society of Nancy, &c. &c. Translated and adapted to the use of the Rural Primary Schools of the United States of America, by F. G. Skinner."

We have read the work with intense interest, and should be pleased to see it introduced into every school in the country.—It treats in an easy and familiar way, of the art of cultivating the soil—of Vegetable Anatomy and Physiology—the reproduction of vegetables—the general consideration of the soil, the causes which affect its value, its mineral parts—the physical properties of the soil—of ameliorators of the soil—the use of lime, marl, clay, sand, ashes and plaster, the effect of paring and burning—and of manures, and their effects generally. Each division of the authors' subjects are treated under separate heads, and, though briefly discussed, are marked by so much good sense and directness of purpose—so much of simplicity of thought and phrase—as to at once interest and instruct the reader, whether he be a plain or learned man. Though it purports to have been written for the instruction of the young,—as a text book for the schools—it is equally adapted to enlighten the minds of all who delight in the science of agriculture, no matter howsoever learned they may be. Avoiding all the pedantry of the more theoretical schoolmen, the authors have adapted their language to the common sense of mankind—to the comprehension of the practical farmer, for whose benefit it was written. To be understood was clearly the object of the writers, and they have been successful. Their work should find a place on the shelf of every farmer's library. Mr. Skinner, in undertaking the labor of its translation, has done his country good service, and we congratulate him and his worthy sire on the ability with which he has performed his task.

"The George Bommer New York Manure Company," it will be seen, by the advertisement which is continued in our No. for this month, is about introducing a new manure to the agriculturists of the United States. The advertisement will explain the nature of the manure, and as the trial is yet to be made in this country, we cannot of course speak of it as we may be otherwise enabled to do when tested by some of our experienced farmers and planters. If the company would send a few barrels to this state, to be tested by such men as Judge Carmichael, Judge Chambers or Dr. Muse, of the Eastern Shore, or Messrs. Capron, Calvert, Bowie, Nall, Carey, and others of the Western Shore, or Messrs. Newton or Ruffin, of Virginia, if the value of the manure should be found as represented, we have no doubt that a very successful business will be done in it. The well known character of Mr. Bommer, who is the Director of the company, is to us a strong recommendation in favor of the new manure; but as we like always to be guarded in our recommendations, we must defer saying anything more for the present.

Chappell's Fertilizer or Agricultural Salts.—Since the publication of Mr. Chappell's advertisement in our last No. we have received numerous enquiries as to our opinion of it. Although we have had very flattering accounts of the value of this new manure, yet none in that form which would enable us to speak with confidence in regard to it. Finding it necessary to take some steps to answer the enquiries of our correspondents, we applied to Mr. Chappell for such evidences as might warrant us in confirming the statements related of its value, and we have been furnished with the originals of letters from gentlemen whose characters are a sure guaranty of the correctness of their statements. These letters we intended publishing in this No., but the pressure upon our pages pre-

vents it—they are from Dr. Allen Thomas, of Howard District, well known to the agricultural public—C. R. Tylor, esq. of this city, and Francis Vadenar, esq. of Montgomery county, State Inspector of Tobacco.

TO CORRESPONDENTS.—To make room for the Prize Essays, we have been compelled to omit a great number of original communications intended for this number, as well as editorials. We regret this the more, as some of them are suited to the season, and others partially promised. From time to time we have issued additional sheets at a heavy expense to ourself, and yet find it impossible to publish one half of the matter which we desire to lay before our readers. We must continue to beg the indulgence of our friends.

VALUABLE LANDED ESTATE.—On our advertising pages will be found offers of valuable tracts of land for sale. That offered by Mr. M'Henry should command the attention of those in want of ship and other timber. The farm of Mr. Keene is perhaps one of the best improved in the neighborhood of the city, and is worthy the attention of any gentleman who desires to obtain a good farm. The delicate health of Mr. Keene induced him to try the country, in the hope of improvement, and we sincerely regret that he has found it unavailing.

AGRICULTURAL WAREHOUSE.—We refer our readers in the vicinity of Washington City, to the advertisement of Mr. Coyle, in our advertising columns.—We have every reason to believe that they will be pleased with the acquaintance of Mr. C., and we have no doubt they will have full justice done in their dealings with him. Mr. Coyle is authorised to act as Agent for the *American Farmer*.

COL. CAPRON'S BULL VALENTINE.—A likeness of this splendid animal, which bore off the first prize at our late Exhibition, is being lithographed for our Journal.—We intended to have presented it with this No. but the artist has not been able to complete it in time.

MR. BOWIE'S ADDRESS.—We publish in another part of our journal the Address delivered by Walter W. Bowie, esq. of Prince George's county, before the Agricultural Societies of Talbot county. We direct the attention of farmers and planters to it with the more pleasure, because it is as beautiful in diction as it is full of knowledge. It is perfect in all its parts, clear, forcible, and truthful. The maxims which the author lays down for the government of husbandmen, are worthy of being printed in letters of gold, and placed over the mantel of every homestead in the country. We conclude by expressing the hope that it may be read and studied by every patron of the *American Farmer*.

ORNAMENTAL FENCE.—We are pleased to learn that the beautiful machinery advertised in the columns of this No. for making picket fence, the operation of which, contributed so much to the gratification of the numerous visitors to the late Fairs held in this city, is being appreciated and introduced already into many of the counties of this State.

We have many inquiries in regard to the cost of the machinery for making this fence, as also for the rights to use it. In reply to the first, we learn that the cost is \$60. The price of the patent right for individuals, counties, or states, will depend on location and other circumstances, the particulars of which will be made known by addressing Mr. Coleman.

CORRECTION.—In last number, page 242, in Mr. Covey's account of his mode of cultivation, instead of "cloverseed, yearly, on corn and wheat"—read, "on corn land wheat"—meaning on wheat growing after corn—not on fallow.

On page 245, in the announcement of the premium for the best 5 contiguous acres of wheat, for 22-2-3 bushels, read "32-2-3." These errors, we believe, were occasioned by misprints in the copy of the proceedings of the Talbot Co. Exhibition which were received by us. The last error, particularly, it is due to old Talbot, and the public spirited farmer, Maria Goldsborough, Esq. who received the premium, to correct.

CORN.—We have had left at our office, several ears of yellow corn, raised by Col. Carey, of Baltimore county—we have heard farmers speak of this variety in very high terms, and on examining the specimens left with us, Col. Capron and Col. Carroll have requested Mr. Carey to supply them with seed for their next crop—which we take it, is a very high recommendation in its behalf.

PROCEEDINGS OF THE BOARD OF MANAGERS OF THE MARYLAND STATE AGRICULTURAL SOCIETY,

At their Quarterly Meeting, held at Baltimore, Feb. 7.

Pursuant to the provision of the Constitution, a meeting of the officers of the society was held at the Hall of the Maryland Institute, on the first Wednesday in February—Charles B. Calvert, President, in the chair.

The President having called the meeting to order, presented a Report of the Committee on Essays, which was read:

Report of the Committee on Essays.

The undersigned committee, appointed by the Maryland State Agricultural Society, to examine the several Essays which were presented for the Prizes offered by the society, ask leave to report:—That they have carefully examined the Essays offered upon the following subjects, viz: *On Draining*, *On the Comparative Value of Drill Husbandry*,—and for *Preventing the Destruction of various Crops by Insects, Birds, &c.* They have assigned the Prize to the Essay on INSECTS marked No. 2. The committee consider it an admirable paper,—its digression in regard to "wheat" is quite justifiable, and extremely interesting. In the opinion of the committee it merits the prize offered by the society.

Nos. 4, 5 and 6, on DRAINING, are each excellent papers,—they are evidently prepared by men of judgment and talent, who have written out the results of their own experiments on the important subjects treated by them. No. 6 is only to be preferred from the simplicity and mechanical exactness with which the process is described, thus rendering the directions for executing the work more easily understood and applied, and rendering the efforts of inexperienced persons more certain of success. All three of the essays deserve prizes, and the committee recommend that the society would vote them—but as the committee have but one to give, it is assigned for reasons given to No. 6.

There was but one Essay offered on DRILL CULTURE—the author, in the opinion of the committee, asserts too much, and proves too little—they cannot, therefore, endorse his views upon the subject. All of which is respectfully submitted.

Jos. E. MUSE,
W. W. W. BOWIE, } Committee.
F. P. BLAIR,

Mr. Dobbin, of Howard District, moved that the Report be adopted, and that the Essays be published in the American Farmer.

Mr. Worthington moved that the subject be laid over until an adjourned meeting to be held this evening, which was concurred in.

The President presented the following letter, which was read. The President stated, that in accordance with the suggestion of one of the Vice Presidents, he had invited Mr. Humphreys, of St. John's College, at Annapolis, to attend the meetings of the society, and had received from him the following answer, which was read:

ST. JOHN'S COLLEGE, Annapolis, Feb. 5, 1849.

Dear Sir:—Your highly esteemed favor of the 3d inst., inviting me to the meeting of the State Agricultural Society, has just been received; for which, accept my most cordial thanks. Nothing would be more gratifying to me, than to participate in the proceedings of the meeting for next Wednesday; but I am, at this time, deeply engaged in preparations for our approaching Commencement on the 22d, in addition to my ordinary term duties. I will cherish the hope of being present, in some future meeting of the society; the formation of which, I heard of, with great interest, as promising the most permanent and best results, for the increased prosperity of Maryland. We have established, this year, in St. John's, at great expense, a complete practical Laboratory, where Agricultural Chemistry is now taught to our classes; and, we are thus striving to do something for the promotion of the same good object.

With high respect, your most ob't serv't,
HECTOR HUMPHREYS.

Chas. B. Calvert, Esq.

The President also presented letters, which were read, from Thos. Swan, Esq., President of the B. & O. R. R. Co.; J. M. Coale, Esq., President Ches. & Ohio C. Co.; and J. I. Cohen, Esq., Vice President of the Balt. & Phil. R. R. Co., in reply to his communication covering the resolution of the Society, passed at the meeting on the 10th November last, relative to a reduction of freight on all articles used as manures, or fertilizers of the soil, to the lowest possible rate of transportation.

Mr. Dobbin, President of the Tide Water Canal Co. being present, stated to the Board that the return cargoes of plaster was taken on the Canal free of toll; and that the toll on lime was placed at the very lowest rate.

The President likewise presented to the Board, letters from the Hon. Mr. Pearce, of the Senate, and the Hon. Messrs. McLane, Evans, Crisfield, and Chapman, of the H. of Rep. of the U. S., in reply to a communication from him, calling their attention to the resolution of the Society, adopted at the meeting on the 7th of Nov. requesting the delegation in Congress from the State to use their best exertions to obtain the aid of the government to the establishment of schools, academies, or other institutions for the diffusion of the sciences applicable to any art or industry, and more especially for the dissemination of a knowledge of the science of cultivating the earth. The letters having been read, on motion, they were laid on the table.

Mr. Dobbin offered the following resolution, which being seconded by Mr. Walsh, of Harford, was adopted:

Resolved, That the several letters received from the Internal Improvement Companies of the State,

be placed in the hands of a committee of four members of the society, with instructions to collect and lay before the society, at their May meeting, all the facts connected with the transportation of commodities in which the agricultural community is interested, and to suggest such modifications in existing rates and regulations as would seem proper to be pressed upon the consideration of such companies.

The chair appointed Messrs. Dobbin, Patterson of Carroll, Walsh, and Capron, of Prince George's, the committee.

Mr. Walsh offered the following resolution, which was read and adopted:

Resolved, That the President of the Maryland State Agricultural Society communicate with the Board of Regents of the Smithsonian Institute, and urge upon them the expediency of instituting a Professorship of Agriculture, and also in their publications for distribution, that they should contribute to the dissemination of information in regard to agriculture, by the circulation of works treating on that great interest of the country.

On motion of Mr. Walsh, it was ordered, that the property of the Society, enclosed in a building at Fair Mount, be insured from loss by fire—and on motion of Mr. Key, of St. Mary's, Mr. Walsh was appointed a committee to enquire upon what terms the same could be effected, and to report to the adjourned meeting this evening.

On motion the Board then took a recess until 7 o'clock in the evening.

7 o'clock, P. M.

The Board met pursuant to adjournment. Geo. M. Gill, Treasurer, made a report of the receipts and expenditures of the Society to the present time, which was read. The report states that there had been received into the Treasury, from members of the Society, and from visitors at the late Exhibition:

And that there had been paid, on various accounts, connected with the late Exhibition, &c.	\$2370.62
	2103.40

Leaving a balance in the treasury, of \$265.22

And this will be increased by the payment of dues from members, &c. to about \$300.

The Report of the Committee on Essays, was then called up. On motion of Mr. McHenry, of Harford, seconded by Mr. Walsh, the Report was accepted, and the Essays approved by the committee ordered to be published in the "*American Farmer*."

Mr. McHenry called up the letters from the members of Congress read this morning, and on his motion, their contents were directed to be noted in the pages of the *American Farmer*.

Mr. McHenry offered the following resolutions, which were adopted:

Resolved, That in virtue of the provisions of the By-Laws, and of the authority vested in him at the last annual meeting of this Society, the President appoint Standing Committees on the following topics, viz: 1st, Live Stock—2d, Products of the Soil—3d, Agricultural Education.

Resolved, That the committees to be organized in accordance with the foregoing resolutions, as well as those instituted at the last annual meeting of the society, are expected to accumulate information on the subjects committed to each respectively—and to report the same in a condensed form to the society at its next stated meeting.

Resolved, That the Corresponding Secretary of the society, notify, in writing, the members of the

several standing committees of their duties as aforesaid, calling their attention especially to the provisions of the By-Laws, empowering committees to fill up all vacancies occurring by resignation or otherwise.

On motion of Mr. Walsh, it was ordered, that a committee of three be appointed by the chair, whose duty it shall be to enquire into the expediency of procuring a suitable lot for holding the Exhibitions of the Society, and on what terms a lease can be had on the same. Committee, Messrs. Walsh, J. Carroll, jr., and Sands.

Mr. Walsh offered the following resolution:

Resolved, That as Ramsay McHenry, Esq. one of the Vice Presidents of this society, and also one of its most energetic members, contemplates visiting Europe during the coming spring and summer, he be requested to keep a diary of his observations on the agriculture of the countries he may visit, and on his return to the country make a report to this society of such matters as he may consider useful and interesting to the agriculturists of Maryland.

Mr. Key seconded the resolution, and moved that a copy be signed by the President and Secretary, and presented to Mr. McHenry; which was concurred in, and the resolution unanimously adopted.

Mr. McHenry then arose, and expressed his willingness to respond to the wishes of the Board, and promised on his return home, to make a report upon such matters as should attract his attention during his sojourn in Europe, which might be deemed worthy of interest to the agriculturists of the U. S.

On motion of Mr. McHenry, the President of the Society, and any two members whom he shall appoint, were appointed a committee to obtain a suitable room, and have the same fitted up for the accommodation of the Society, and the meetings of its members at all times,—and that notice of the opening of the same, and the location thereof, be published in the *American Farmer*. The President appointed Messrs. Dobbin and Key as the committee.

Mr. Walsh made a report, relative to the Insurance on the lumber belonging to the Society—that the premium thereon would be 2½ per cent. in the Hartford Insurance Co.—and that the offer be accepted—which was concurred in, and Mr. Walsh was authorized to effect the same.

The Board then adjourned to the next quarterly meeting on the first Wednesday in May.

By order, SAM'L. SANDS, Rec. Sec.

VISIT TO CATALPA HILL.

Some few weeks since we paid a visit to "*Catalpa Hill*," the delightful and beautiful residence of J. G. Cox, esq. It is situate a little west of the Reisterstown turnpike, about 2 miles from the heart of the city; and although located on a hill, and so near this great mart of commerce, is, from its peculiar advantages of position, well nigh as secluded, and enjoys as much privacy, as though it were some twenty miles distant. It may emphatically be called, "*rus in urbe*;" for, of a verity, it is both *town* and *country*—it possesses all the advantages of nearness to the city, without any of the disadvantages arising from an exposed situation. When the woods are clad in foliage, Catalpa Hill, is as a sealed book, shut out from the inquisitive gaze of the intruder, while the elevation on which the mansion rests, affords to its

inmates, a prospect, whose enjoyment carries pleasure to all who delight in the beauties of nature increased by the adornments of art.

The mansion house is as spacious in dimensions, as its interior is well arranged. The whole establishment is heated by a furnace, and we will add, that go whither you may through its numerous apartments, and let the cold without be of what intensity it may, all within, enjoy a temperature as delightful as could be desired. In the internal economy and arrangement of his dwelling, Mr. Cox appears to have looked to the comforts of all. In his bath-house, as best may suit their tastes and health, his family can enjoy a *Shower*, a *bat*, or a *cold bath*. Nor has he neglected the convenience and comfort of his servants. In the kitchen he has provided them with supplies of cold and hot water, for all domestic purposes, so that, in bad weather, they may be saved from exposure.

The grounds around the dwelling are beautiful; in front and rear, by lawns, around and through whose circular carriage drives, trees, and shrubs, and flowers, of countless varieties are seen—among the floral tribes, are to be found from seventy to eighty different kinds of the most choice *roses*. Here stands two massy catalpas, there the stately oak, the emblem of our naval pride, denuded of their foliage, and yonder, as if mocking the nakedness of their neighbors, stand ranges of evergreens, dressed in their summer vestures. But in the classic and beautiful language of the late *Eduard C. Pinkney*, one of America's best poets :

"When summer's sunny hues adorn
Sky, forest, field and meadow,
The foliage of the evergreen
In contrast seems a shadow.—
But when the tints of autumn have
Their sober reign asserted,
The landscape that pale shadow shows
Into a light converted.—
Thus griefs that frown upon our mirth,
May smile upon our sorrow—
And many dark fears of to day
May be bright hopes to-morrow."

Passing from lawns, and denuded trees, from flowers, from shrubs, from evergreens and carriage drives, let us look awhile at those arrangements, and those appliances, which look to the comforts of the homestead. Well, there's the *wood-house*, well stored with fuel:—in one corner of it stands a capacious *Refrigerator*, capable of holding a week's supply of ice, to save the trouble of daily drawing from the ice-house—near by, is the *ice-house*, itself, filled with ice to its brim—next comes the *Dairy*, well appointed, well supplied with water, and as clean "as a bridegroom new trimly reaped"—beside it, covered by the same roof, is the *lardery*—then, in close position, is the *wash-house*, the *mangling and drying room*—in these latter conveniences, the washing and ironing of the family are done, without having the culinary and other arrangements of the kitchen incommoded.

As we entered the *Poultry Yard*, our attention was attracted by an *Aviary*, well filled with *Partridges*, undergoing the education of *domestication*, the success of which we fear. Speaking of the poultry-yard, reminds us that it covers an acre of ground, well enclosed by a plank and picketted fence, some nine or ten feet high. This is sub-divided into five separate yards, one being allotted to each breed of fowls—about one-half of the whole enclosure, the western part,

serves as a common ranging ground for the fowls: East of the poultry yard, is a grove or park of forest trees, and also a young orchard of choice fruits, of every kind; the latter recently planted by Mr. Cox. Into these, and the ranging ground, just described, the fowls are alternately turned through sliding doors, for exercise, health, and pasture, but are always kept apart so as to prevent intercourse, and preserve the purity of the different breeds. Each yard is supplied with *self-feeders* and *fountains*, so that food and water are always accessible to them: *gravel*, *sand*, *ashes*, and *lime*, protected from the weather, are also provided. The interior arrangements of the hen houses are judicious, and well calculated for their respective purposes, whether the *laying*, *setting*, or *breeding*, or the health of the birds be taken into the account—the manure has its place of depot, is removed regularly, and kept from exposure to the weather. A *dove-cote* surmounts one of the hen-houses, and is well filled with *fancy pigeons* of every feather. The fowls roost in the second stories of their respective apartments, and ascend by steps to their roosting places—steps also are provided to each range of nests—each nest has a stone nest-egg.—Around the hen-yards, earthen pots are placed for the accommodation of wrens, so that the place is enlivened by those modest and innocent songsters during their stay among us.

We noticed the following breeds of fowls—the *Buck's* county, the *Eagle*, the *Jersey Blues*, and the *Dorkings*, all large—very large—some of them of elephantine size, and the *Poland Topknot*. These may be called the staple breeds of the establishment—but they are not all the distinct varieties to be found there:—for there you'll find the proud aristocratic little *Bantam*, so distinguished for his tiny beauty, his gallantry, his pugnacity, and his self-conceit—there too, you may see what is, in reality, a curiosity—a pair of what is termed, and we think appropriately—the "*Rabbit fowl*"—they are about the size of the largest kind of *Bantams*—they are sometimes called the "*silky fowl*." The plumage is as white as snow, beneath which is a coating of fur-like substance, as silky as *eider-down*, and soft as a maiden's cheek; but if you blow aside this beautiful protection, the skin disclosed to view, is as black as *Erebus*, and fills the epicurian mind with loathing. The bird is indigenous to Japan, where it is much prized. It is also found in China. As a thing to look at, its exterior commends it to a judge of symmetry of form, and beauty of feather—its docility, too, wins upon one's regards, but certes, its flesh was never destined for christian palate.—And then again, we saw a *stag* and *pullet*, who have seen some six or eight moons, called the "*Curacao fowls*;" these are said to be a very large breed, and judging from their appearance, we should be disposed to think they are so—they are well-proportioned, slightly birds, both in form and plumage.

After seeing the sights of the poultry-yard, we passed into that part of the basement of the dwelling, wherein is the *furnace*, by which it is heated. There we found the *winter workshop*, where, in inclement days, when out-door work cannot be done, the hands are occupied in jobs of carpentering—and there too, as everywhere else, all things were in order. Having completed our examination in this quarter, we next proceeded to

THE GARDEN.

It is situated South of the lawn, immediately in front of it, at the summit of a hilly slope; it lies well to the South, and is divided into beds by a se-

ries of terraces. Through its centre, leading from the lawn, are a continuous range of steps, supported on either side by railings, which conduct you from one elevation to another, until you land at the level ground. As you reach each successive slope, there are walks, diverging to the right and left, communicating with the several compartments. These walks are covered with tan, the which, in our opinion, is far preferable to gravel, as a material for such purposes, being more pleasant to the tread, an equal security against the growth of grass, besides possessing the advantage of becoming dry in an hour or so after the heaviest rains.

At the entrance of the garden gate, there is a latticed arbor, covered with choice grapes. Against the north wall, which forms the base of the first terrace, on either side of the main walk, there is a border covering the whole width of the enclosure, which is studded with vines of the rarest varieties of grapes.

As you descend from terrace to terrace, the eye looks upon beds of strawberries and asparagus, of ample dimensions to assure full supplies of this delicious fruit, and excellent vegetable, not only to Mr. C.'s own household, but also to his numerous friends who may partake of his elegant hospitality and bounteous fare. The borders of the several beds are planted with gooseberries and currants, while the raspberry finds a home in each appropriate spot.

In the genial season, on entering the garden from its Southern front, as you ascend the main walk, should you look to the right or to the left, you will behold a bloom of *dahlias*, of every color, tint and hue, which will then beautify and adorn the banks of the several terraces, and cannot fail to impart interest, and warm into admiration every floral votary.

We were much pleased with Mr. Cox's arrangement of the sashes of his hot beds. The glasses are *thick and small*, and, therefore, comparatively secured from breakage. They are made to run upon rollers, which greatly adds to the facility of handling them; each sash is also provided with permanent notched supports, so constructed as that any desirable quantity of air can be admitted with ease, and may be increased or decreased at the will of the gardener. We saw growing on the hot beds, lettuce, already headed—asparagus, fit for the table—plants of the early Kidney potatoes, tomatoes, egg plants, cauliflower, cucumber, rhubarb, celery, simblins, cabbage, mint, parsley and radishes, the last fit to draw, and rose cuttings—all presenting a most healthful appearance, and proving, by their forwardness, that *Mr. Dore, the gardener, is not only a master of his art, but that, with great skill, he combines fidelity and attention, those rare virtues which so commend the employer to the employer.*

Among the appliances of the garden, is a tool house, which is judiciously arranged for the safe-keeping of the tools and implements; and, from a careful examination of it, we soon discovered that *there was not only a place for every thing, but that every thing was in its place.* In it we found a chest of drawers, a depository for seeds, in which there were numerous papers of garden and flower seeds, neatly done up, and as neatly labeled. The tools and implements were arranged in the nicest order, bearing the evidence about them that they had been well cleaned before being put away. And, in this connection, we will remark, that it is the custom of Mr. Cox to have all the tools used through the week cleaned every Saturday evening, before being deposited in the house—a custom only honored in the observance.

We noticed, also, a contrivance for the protection of the matting, which we highly approved of.—Against the eastern wall, there is a range of projecting shelves, under which the mats, when not in use, are placed, and thus protected from the weather. Again: between each of the hot beds, a plank is laid, to receive the mats as they are withdrawn from the glasses. By this precaution, they not only last longer, but the danger of breaking the glasses, from attaching stones and gravel, is prevented.

On leaving the garden, you enter the Barn yard, wherein are erected a horse stable, carriage house, wagon sheds, cow stable and piggery—all constructed with an eye to utility, ventilation, economy, comfort, cleanliness and health, without the slightest pretension to ostentation and show. The mangers and racks of the horse stable are protected by metal from the possibility of injury from the biting of the animals. In a separate room, the harness, saddles, bridles, gearing and tools are kept secure from dust: in this room the carriage driver sleeps. By means of granite conduits, the urine, as voided, is conveyed to a water-tight dung pit, located in the cow yard, adjoining the stable; into this is, also, conducted, by a similar convenience, the urine of the cows and hogs. The solid excretions of the horses, cows and hogs are, likewise, daily removed with care into the same repository, so that the apartments of the several kinds of animals are always clean and free from any impure or noisome exhalations.

The rain water which falls on the stable is conducted, by spouts, into reservoirs, for the use of the gardener—a most prudent arrangement.

The feed bin is located in the second story; and, by a very notable arrangement, as simple as effective, the feed is brought down into the stable below. This is, indeed, a labor and time-saving contrivance, and needs only to be seen to be admired.

South of, but adjoining the stable yard, separated by neat fencing, are the Geese and Duck ponds, with houses for their accommodation, contiguous; the fish and the ice ponds. These several ponds are supplied from a never-failing spring of the purest water—the supply being so arranged that the depth can be regulated at pleasure. One advantage resulting from this contrivance is this: the thickness of the ice can be graduated.

The breeds of Geese consist of the Chinese, a massy bird, as graceful in form as beautiful in feather, and the common goose. The Ducks are the white and grey topnots, both large varieties, and among the most interesting of their species, and the Muscovy. The ponds are surrounded by golden willows, which impart interest to the scene.

On the Southern line of the place, beyond the pond, is the gardener's house, a large and convenient cottage.

The Piggery is a convenient structure; the pens so arranged as to afford separate apartments for feeding and lodging the several inmates, thereby ensuring cleanliness and dry beds, two things which are as desirable as healthful. The present occupants of this establishment are old *Dutchess*, a most noble sow, a cross of the *Leicester* and *Chester*, the same animal that was so much admired at the Fair of the Maryland State Agricultural Society, and which bore off the first premium. Independent, however, of that honor, she had taken, previously, premiums in the States of New York and Pennsylvania. In the adjoining pen is a promising full *Chester* sow, of fine growth, 11 months old; and next to her stands *St. Patrick*, a full *Chester* boar, a most athletic ani-

mal, looking sufficiently vigorous and sinister to give promise that he is destined to reflect high distinction upon the hogsocracy—if we may coin the phrase—of our good old commonwealth.

Mr. Cox's Cattle consists of Dairy Maid, an imported full bred Durham Cow, and her heifer calf, not quite 2 years old, and 1 native cow. Dairy Maid is by Harsley, 2091, (Harsley's dam by Pilot, by Pilot, 496) by Rob Roy, 547; Rob Roy by Remus, a son of Comet, 155; dam Lady Jane, by Comet, 155, (sold for 1,000 guineas) g. d. Cleasy Lady, by a son of Favorite, 252; g. g. d. Lucinda, by Mr. Hutton's bull, of Marske; g. g. g. d. Lucy, by Barningham, 56. Her milking properties are remarkable. In 1839, she averaged, for a week, 32 quarts a day.

The farm of Mr. Cox is a small one, being only 12 acres; but it may truly be said to be *multum in parvo*—for, though small, it hath much in it; and, while we looked on and witnessed the system, the order and the arrangement manifested every where, we could but regret that it was not a large estate, situated in some unimproving district, as the example to be found in Mr. C.'s system could not fail to stir even the most listless agriculturist up to action—to such action as would make old fields bid adieu to the sedge and poverty grasses, and dress themselves with the luxuriant livery of the clovers.

On looking at our notes, we find that we have omitted to notice two very essential things. On the western wing of the house, there is a Belfry, provided with a bell, used, at present, to summon the hands to their labor, and which, in case of fire, which God forbid should ever occur, would be found eminently serviceable to call his neighbors to his assistance: the other may be found in the fact, that we discovered a dozen fire buckets, snugly hung up underneath the northern portico, in readiness for an emergency. These are things that every farmer should have, but, alas, few think of; and we note them in order that the provident care of Mr. C. may awaken others to a sense of duty.

BONE EARTH AS A MANURE—TO WHAT SOILS APPLICABLE, &c.

The following questions have been recently submitted to our consideration; and, having personally written to the parties who asked them, we shall embody in this article the substance of our several answers, in the hope that the information which it contains may be of service to others:

1. What soils are benefitted by the application of bone dust as a manure?

2. What is the proper quantity of bone dust to apply to an acre of ground?

3. How often is it necessary, in any given number of years, to apply bone dust to arable lands?

4. Are there any other substances, besides bones, which afford the peculiar element that is supposed to give to bones their greatest value?

5. Is bone dust made from bones which have been boiled by the glue manufacturers equally as valuable, as a manure, as is that which has not been subject to that process?

6. Is bone dust a lasting manure; and if so, how many years will its effects be visible?

7. To what crops can bone dust be profitably applied as a manure, and what period is the most appropriate one to apply it? and,

8. Which is the best way to prepare and use bone dust?

To these several questions, our answers were, substantially:

First—As to the soils to which bones are adapted.—

From the nature of the composition of bones, they can be advantageously used on any soils which are not absolutely wet, or so cohesive as to be intractable. Bone earth, is indispensable, as a manure, to any soils that may have been long in culture, without the application of substances containing the phosphate of lime; because the original supply in the earth will, necessarily, have become exhausted by the crops grown thereon, and must, therefore, be artificially returned. Analysis teaches us that, among all the cultivable plants, the exceptions are few, indeed, in which phosphoric acid is not a component part; therefore, it is fair to infer that it is necessary to the perfection of their frame-work and seeds.

Having indicated the kinds of soils upon which bones act beneficially, as well as those to which they are not so well adapted, we will endeavor to give our views in support of our opinion.

Bones being of a hard substance, require the action of both heat and moisture, to excite them to decomposition. These agents are denied them where they may be buried in wet or tenacious clay soils. From the continual presence of water in the first of these soils, they are, necessarily, cold; and, from the latter, a very large portion of the influence of the atmosphere is excluded, and, therefore, from the character of both, they are unexcitable.

In sandy loams, where sand predominates, and where, from the porosity of the earth, the sun and air have free access, the action of bones is direct and prompt; because heat and moisture are ever present to carry on their decomposition, and prepare them to give up their mineral and animal riches to the wants of the growing plants.

Clay moulds, too, are favorable; for, although the clay predominates in such soils, it does not exist in such excess as to preclude those influences which conduce to the reduction of bodies enclosed therein; and though the process of decay may be more slowly carried on than in the two first descriptions of soils, still it will be sufficient to furnish supplies to meet the wants of the plants.

In sands, where but little clay exists, the process of decomposition will be still more active; but this very activity curtails the period of benefit. Especially is such the case with all that portion of the bone earth which is formed of animal matter, and which, from its very nature, under the influence of heat and moisture, will be resolved into gaseous or fluid matter, faster than the capacity of the plants can take it up, and, as a consequence, much of the nitrogen be lost, by escaping through the pores of the superincumbent body of sand, which, for want of the power of cohesion, can offer no resistance to its

passage into the air. Even in such soils, however, the benefits to be derived from much of the cartilaginous, gelatinous, and fatty parts of the bones, may be prolonged, by mixing plaster with them. Through such agency, the ammonia, as evolved, would assimilate with the sulphuric acid of the plaster, form the sulphate of ammonia—a body not essentially volatile—and, therefore, comparatively fixed, but subject to the action of the decomposing agents we have named, in such degree as will make it yield up, in moderate, though healthful, quantities, its mineral and nutritive elements to the necessities of the growing vegetation.

From the views we have advanced, it will be perceived that we are of opinion—and our opinion is borne out by all the approved elementary writers, as well as by the observation of practical farmers—that bone manure is eminently essential to the perfection of all seed-bearing vegetables, and can be beneficially applied to any lands *not* absolutely wet, or which may not be so cohesive or intractable as to resist the influence of heat and moisture, and, therefore, prevent the process of decomposition, and that bones should never be applied to wet lands before they are drained.

It is due to the action of bones, and to their peculiar applicability to particular soils, to remark that the fact is borne out by the experience and observation of intelligent farmers, both in this country and in Europe, that the good effects of applications of bone manure are more manifestly visible upon poor, worn-out lands, than upon others, though they are beneficial to *all*, whose mechanical structures do not preclude the possibility of the process of decomposition being carried on.

Secondly—As to Quantity per Acre.—The proper quantity of bones, per acre, is still a debatable question, as well among theoretical writers as among practical farmers; nor is the question soon likely to be settled. We, however, conclude that the quantity to be applied, per acre, must, in a great measure, depend upon the condition of the land upon which they are to be placed—to be increased or decreased, as the soil may be presumed to be more or less exhausted of bone earth. Upon poor lands, which may have been long in culture, 20 bushels per acre would prove to be about the proper dose to bring them up to a state of fertility; while, upon those in tolerable heart, 10 bushels would be sufficient.—Again, in fertile lands, where, perhaps, nothing might be wanting but phosphoric acid, 5, or even 2 bushels, per acre, it is possible, would be sufficient to supply the deficiency, and answer all present purposes of such soils.

These quantities are less than have been applied in England. There, as high as forty, fifty, and sometimes seventy bushels, per acre, were, at first, used; but, as far as we can judge, by comparing the opinions of the authorities upon the subject, the approved

quantity used there, now, by the best agriculturists, is about 20 bushels per acre, which we take it would be a safe maximum, while the lesser quantities named by us would, under the circumstances alluded to, be judicious applications. The agriculturist of ample capital could not do better than to apply the highest number of bushels indicated in the preceding part of this head of our article; but we believe that almost every advantage to be derived by an application of bones, may be secured during a rotation of crops, at the rate of 10 bushels per acre. We believe, also, that that quantity will furnish the requisite supply of phosphoric acid to the grains and grasses to be grown during any period to which a rotation of crops ought to be extended.

Liebig affirms that "40 lbs. of bone dust is sufficient to supply three crops of wheat, clover, potatoes, turnips, &c. with phosphates;" but we confess that our faith in the efficacy of such infinitesimal doses is not sufficiently strong to induce us to swallow that opinion. The opinion deduced from *Berzelius'* analyses is, that 8 lbs. of bones contain as much phosphate of lime (bone earth) as 1,000 lbs. of hay or straw abstract from the earth, and that 2 lbs. of it is as much as 1,000 lbs. of the grain of wheat, oats, &c. takes up. This opinion may be very near the truth—as much so, indeed, as the nature of the case will admit of—still, in the application of mineral manures, a much larger quantity should be applied than the grass, straw or grain to be grown on the land will take up in a single crop, or we lose all the advantages from permanent improvement, a consideration which should ever be uppermost in the mind of a skilful and economical farmer.

In connection with this part of the subject, it may be proper to say something with respect to the *weight of bones*. A bushel of green bones, $\frac{3}{4}$ inch size, weighs about 45 lbs.; the same quantity of bone dust, 54 lbs. 75 bushels of crushed green bones weigh about $1\frac{1}{2}$ ton; the same bulk of boiled bones, about 2 tons.

We have, thus far, spoken of the estimated weight of bones in England, and shall now direct the reader's attention to what we understand to be their weight in parts of our own country, where the business of grinding them for agricultural purposes are carried on. In *Philadelphia*, bones ground by the largest concern there, are said to weigh 50 lbs. to the bushel. In *Baltimore*, they are variously estimated; while those ground by some individuals are said to weigh from 44 to 50 lbs. to the bushel, those of others are stated to reach from 56 to 60 lbs. This difference in weight, if there be no admixture of any foreign bodies, is an important one, being no less than 32 per cent. between the lowest and highest—a difference, by the way, unaccountable to us, if the heavy bones are pure, and we are assured that they will be warranted as such.

Having remarked upon the weight of bones, it may render this branch of our subject the more complete by stating that the price is 50 cents per bushel.

Thirdly—As to the frequency of application.—As to the question—"How often is it necessary, in any given number of years, to apply bone dust to arable lands?" we have to reply: That the frequency of such applications will depend upon the quality of the soil, and upon the quantity of bone dust applied at any one time. As we have shewn under the preceding head, every 1,000 lbs. of hay or straw are supposed to extract from the earth as much phosphoric acid as can be supplied by 8 lbs. of bones, and that 1,000 lbs. of grain as much as can be furnished by 2 lbs. of bones. Now, if we were to rely implicitly upon the numbers we have named, it would be an easy matter to assume a theory, and figure out the number of years that any given number of bushels of bones, which may be applied to an acre of land, would last; but, as there are so many contingencies that might place the bones beyond the action of heat and moisture, and, consequently, arrest their decomposition, and, as a matter of course, place them beyond the voltaic action of the roots of the plants—and as no one should trust to chances, where his own and family's welfare and happiness are so intimately concerned, as they are in the products of his farm, we believe the safest plan would be, after the first dressing with bones, which should be a good one, to renew an application of 5 bushels per acre, at the commencement of each succeeding rotation of crops, whether that rotation extends through a period of four or five years.

The good effects of applications of bones, in England, have been visible after a lapse of 20 years, and, indeed, more; but these applications were made in the early period of their use, when from 50 to 70 bushels to the acre were applied. Such lavish applications, however, are not necessary, nor are they desirable, as the lesser quantities, which we recommend, are sufficient for all practical results, and require much less outlay—a matter of the utmost moment with most agriculturists.

Fourth—As to other substances containing bone earth.—With regard to the question—"Are there any other substances, besides bones, which afford the peculiar element that is supposed to give to bones their greatest value?" we answer: That there are many other bodies which contain the phosphate of lime, the substance presumed, by some, to be the "peculiar element in bones, which give to them their greatest value," some of which bodies we will attempt to enumerate. Bone earth is found in the wood of most, if not all, trees, to a greater or less extent; and, hence, to this fact, in part, are we to ascribe the value of ashes as a manure, even after the potash has been extracted from them by the soap boilers. It is to be found in the leaves and mould of the forest, in peat, in marsh mud, in the weeds of the field, in barn yard and stable manures, in oyster shell lime, in marl, in some stone limes, in coral and in fishes, and it is found in immense deposits in the mountains

of Estramadura, in Spain—in smaller quantities in some rock formations in Western New York, and also in urine and various other bodies.

Fifth—As to the relative Value of Bones.—As to the question—"Is bone dust made from bones which have been boiled by the glue factories, equally as valuable, as a manure, as is that which has not been subject to that process?" we would remark: That, in our opinion, bone dust made from fresh bones is preferable to that which is made after the bones may have been subjected to the glue maker's boiling. Bones, in their fresh state, contain considerable portions of fat, gelatine and cartilage, all of which substances are convertible into what may be termed nutritive manure, so that, in applying a dressing of such bone earth, you supply the plants with what may be aptly termed bread, meat, and clothing, too; for you provide them with substances which alike contribute to the straw, the blades and the stalks, and the berries. It is, however, but fair to add, that this advantage in favor of the fresh bones can only be expected to last for one or two years, as, from the destructible nature of the organic portions of the bones alluded to above, and their susceptibility to change into nitrogenous fluids, their effects are much less permanent than are those of their phosphate constituents.

Professor Morfit, an English analytical chemist, of considerable distinction, seems to give a preference to boiled over unboiled bones. These are his words:

"If the grease is not carefully removed by boiling, the fat re-acts upon the carbonate of lime of the bony net-work, forming a soapy lime, which resists all atmospheric influences, and hence an impediment to the fertilizing influence of the bones, especially when they are not finely powdered."

Count Chaptal, who, besides being an accomplished chemist, is also an extensive and devoted agriculturist, entertains the very opposite opinion with respect to the relative value of boiled and unboiled bones: and while we are willing to concede an equality of chemical knowledge to professor Morfit and Count Chaptal, we think, from the practical experience in agriculture of the latter, his opinion is entitled to more consideration than that of the former.

Count Chaptal entertains these views:

"In some countries the fat and a great part of the gelatine are extracted from bones, by boiling them in water before selling them for agricultural purposes. But by this operation they are deprived of a great part of their fertilizing powers. Upon carefully observing the appearance of a mass of bones under fermentation, I found the surface of a part of them to be covered with a thin coating of an unctuous substance, sharp and biting to the taste. This appeared to me to be formed by the combination of gelatine with ammonia; this last being developed during the decomposition of all animal substances. The observations of M. D'Arcet, to whom we are indebted for a very valuable work upon gelatine, support this opinion."

"It is possible that, when the ground bones are employed without having been first submitted to the

commencement of a fermentation, the gelatine is gradually decomposed in the ground, and the same result at length produced; or we can conceive that water, acting upon the bones, will dissolve the gelatine, and transmit it to plants; and, in both these cases, the influence of the bones upon vegetation is very great, whether it be considered as a purely nutritive manure, or in the double connexion of a nutritive and stimulating substance."

Professor JAMES F. W. JOHNSTON, *Reader of Chemistry and Mineralogy in the University of Dublin*, one of the most reliable agricultural authorities of the age, in relation to this question, expresses himself thus:

"When bones are boiled, the oil will be separated, and a portion of the gelatine will, at the same time, be dissolved out. *The bones, therefore, will be, in reality, rendered less rich as a manure.* But as they, at the same time, take up a considerable quantity of water, boiled bones will decompose more rapidly when mixed with the soil, and thus will appear to act as beneficially as unboiled bones. Hence the reason why, in Cheshire, where boiled bones are used to a considerable extent, many practical men are of opinion that their action upon the crops is not inferior to that of bones from which the oil has not been extracted by boiling. The immediate effect may, indeed, be equal, but the total effect must be less in proportion to the quantity of organic matter which has been removed by boiling. Cases, however, may occur in which the skillful man will prefer to use boiled bones, because they are fitted to produce more immediate effect where—as in the pushing forward the young turnip plant—such an effect is particularly required."

With regard to the fears entertained by professor Morfit as to the re-action of the grease of fresh bones upon the carbonate of lime, the formation of "soap of lime," and the danger of its resisting the action of heat and moisture, we do not entertain the slightest apprehension. We have, by the use of sulphuric acid, so digested fresh bones, as to form that very soap of lime of which he speaks; and we do know that, in that form, it was subject, by the presence of heat and water, to be reduced to a fluid state, and that, by continuance in the vessel in which we made the experiment for a few weeks, it gave strong evidences that the decay of the animal portions of the mass had taken place—thereby proving that the fears expressed by professor Morfit are not well grounded.

From all we have read and thought upon this subject, our mind has arrived at these conclusions:

1. That *fresh bones* will tell better the first crop than bones which have been subjected to boiling in the process of making glue.

2. That bones which have been boiled by the glue maker, pound for pound, or bushel for bushel, contain more of the *phosphate* and *carbonate* of lime than do the unboiled bones, besides fractional parts of per centums of *magnesia*, *soda* and *potash*, and, therefore, weight for weight, will last longer.

3. That on poor soils, where nutritive manures are indispensably necessary, *fresh bones* are prefera-

ble, because they supply both the animal and mineral helps of which such lands stand so much in need.

Sixth—As to the permanency of Bone Manure.—In respect to the question—"Is bone dust a lasting manure, and if so, how many years will its effects be visible?" the reader is referred to our answer to the third question in the series, where he will find this one substantially answered.

Seventh—As to what crops bones are applicable.—In answer to the question—"To what crops can bone dust be profitably applied as a manure?" our reply shall be brief. We say—to ALL!

Eighth—Mode of Application.—"Which is the best way to prepare and use bone dust?" Upon the subjects involved in the above question, or rather questions, there are a variety of opinions, as well as a difference in practice, which we will endeavor to explain.

1. *Bones*, after being ground—and the finer, the better—are, by some, sown either broadcast or in the drill, without any other preparation. When thus sown, they decompose slowly—do not act so efficiently for the first year, but continue their good effects longer.

2. *Bones*, after being ground, are sometimes mixed with double their quantity of *ashes*, thrown up into a conical pile, and permitted to remain until they become heated, when they are immediately used, whether intended for *broadcast* or *drill* sowing, or to be applied in the *hill*.

3. Instead of *ashes*, rich mould is sometimes used, as the substance of compost, with bones. When mould is used, *ten times* the quantity of that substance is composted to every one of the bone dust.

4. Where *ashes* may be used, we should always add, just before applying the mixture, a bushel of plaster to whatever quantity we might intend for an acre of land, with the view of arresting the volatile gases; for, even in boiled bones, there is an appreciable quantity of nitrogenous matter left, which, without this precaution, would fly off and be lost; whereas, in mould, there is almost always enough organic remains, to act, to a certain extent, as a *fixer*.

5. Where the greatest and most immediate benefit to a single crop is the object sought to be attained the best and surest method of preparation is, perhaps, that recommended by professor Liebig. He says:

"The most easy and practical mode of effecting their division, is to pour over the bones, in a state of fine powder, *half* of their weight of *sulphuric acid*, diluted with three or four parts of water, and, after they have been digested for some time, to add one hundred parts of water, and sprinkle this mixture over the field, before the plough. In a few seconds, the free acids unite with the bases contained in the earth, and a neutral salt is formed in a very fine state of division."

As the means of *applying* the bone earth, when thus reduced, may not be within the reach of most

farmers, few being provided with the conveniences of distributing liquid manures, we will state, that, after the bones have become dissolved by the dilute solution of sulphuric acid, by permitting them to remain a few days, the water will have become evaporated, leaving behind a substance of the consistency and nature of *soft soap*, which can be very readily mixed with mould, and applied to the ground, by hand, without difficulty.

We have reduced bones, by the above process, to the state mentioned above, and, therefore, unhesitatingly vouch for its practicability.

THE STATE OF AGRICULTURE IN SOMERSET CO.

NEAR KINGSTON, Somerset Co., Jan. 15, 1849.

To the Editor of the American Farmer.

SIR: Enclosed I send you the price of my subscription for the last and present volume of your paper. I see, in your last number, you have reminded your patrons that "perhaps justice to yourself requires that you should stop the paper of those who have failed to renew their subscription." No doubt that is true; but I, for one, am unwilling to part with you, and do not intend, so long as I can raise one dollar per year to spare: and, sir, whatever excuse I may offer for not renewing my subscription at the proper time, I can assure you it has not been because I deemed your journal not worth the price; for I would not be without it for double its cost. Indeed, I doubt whether the benefit I have received through it could have been supplied me for twenty times the amount; for, although I do not claim to be a "practical farmer," as yet, still I feel certain that I am, at least, more successful in my attempts than before I commenced taking your paper. Every copy of the American Farmer has been by me regularly received and attentively read. And if I have added any thing to my little stock of knowledge, in this most ennobling of all other pursuits, I am indebted, sir, to yours and to similar publications, but more especially to yours: and I now return my sincere thanks to you, and to your able correspondents, for the many valuable lessons I have received.

I regret to say that there is not, that I know of, a single active Agricultural Society or Club in all Somerset County; at least, I know there is not in the lower part of the County. I believe a small society has, or had, an existence here, some two or three years ago. The number of its members, I think, was limited to twelve. But, if even that Society yet exists, its operations must be very limited, and kept very quiet; for, if it has ever made any experiments, either in agriculture, horticulture, or in any other science or thing whatever, I have never heard of any results. I do not design to cast the slightest reflection upon those intelligent and honorable gentlemen, members of that society; but if any thing can be said, by way of stirring them up a little, perhaps it will do no harm.

Whilst a majority of the counties in the State have caught the spirit of improvement, and are rapidly moving onward, old Somerset stands (with some praiseworthy exceptions) where she has stood for years. "As their fathers did, so do too many of her sons yet." I say with some exceptions—for, sir, it would be next to impossible that such a persevering and enterprising spirit should exist, as it does, so near the centre of our State, without some of its influence being felt through every portion of

it. Signs of improvement may be seen in different parts of our county, but nothing compared with what might be expected.

I should not like to admit that we are behind any county in the State so far as general intelligence and information upon other subjects are concerned; but we are sadly behind and deficient in agricultural information and enterprise. Here, as everywhere else, many of our most respectable and intelligent inhabitants are cultivators of the soil; and not a few of us appear to be tolerably good theoretical farmers. But it is seldom we reduce our theory to practice. A *Stabler*, a *Capron*, or a *Calvert*, might, perhaps, effect changes in a community like this, delightful to contemplate. Indeed, we have citizens of our own who, if they would only turn their attention as assiduously to this subject as they do to other professions and pursuits, not so worthy of their time and care, they could soon effect near as much good, perhaps, as either of those truly honorable gentlemen; for what they have done, others can do.

But, surely, the time is not far distant when Somerset will take her place amongst the agricultural counties of the State! I can see no reason why she should not take her stand in the front ranks; for, as it respects natural fertility of soil, facilities and resources, she is scarcely surpassed by any of her sister counties. If it were not so—if her lands were not naturally good—there could not be breadstuffs sufficient, raised at home, for her own consumption. I think you will admit the truth of this, when I tell you what has generally been, and what, to a large extent, is yet the system practised in this county. In the spring, the land is ploughed, (not unfrequently in mud and mire, for often draining is out of the question,) and planted in corn. In the fall, the corn is gathered and fodder stacks fencd. Then all the cattle and hogs are turned in to eat the standing fodder, scattered corn, &c.; and there they remain all winter, through all sorts of weather. In February and March, or as soon as the team can walk without miring, and often before, the same field is seeded down in oats. The oats are barely saved, before all the cattle, sheep and hogs are again collected from the commons and turned in on the stubble, and there remain until the next fall. And yet, strange to tell, there is land here, and not a little either, that has been subjected to this treatment for 30 years—it may be longer—and has never, during the whole time, received one pound of artificial manure, that will yet produce from 20 to 25 bushels of corn to the acre—a small crop, 'tis true, but, under the circumstances, a great one. The wonder is that it will produce any thing. Whenever, and wherever, any thing even approaching a judicious system is adopted, it is surprising how rapidly our land will improve. The materials from which manure can be manufactured, is exhaustless; our swamps, marshes, the shores of our creeks and rivers, abound with it; and all the capital necessary, is labor, guided by skilful hands.

Somerset may be made one of the richest agricultural counties in the State, without spending scarcely any thing for bought manures. By far the largest portions of the lands in the county can be made rich by the application of vegetable manures alone. I do not mean to say that I believe lands can be permanently enriched without the aid of mineral manures: but I believe that these agents, to a considerable extent, already exist here, especially in those soils bordering on the salt water creeks and rivers. I believe this, because, wherever such manures have

been judiciously applied, success has generally been the result, which would not be the case if the soil was destitute of the minerals.

But I have written much more than I intended when I commenced the letter, and will stop, after asking you to excuse me for trespassing so long upon your time and patience.

Yours truly, T. T. G.

MANURING CORN GROUND.

PETERSBURG, Va. Jan. 12, 1849.

To the Editor of the American Farmer :

Permit me to trouble you with one or two enquiries. I am a new beginner at farming, and consequently know but little about the business. I am now preparing a field (which is very poor) for my present year's corn crop—I shall not be able to procure manure enough in time to give it a sufficient dressing, and therefore design applying guano in the hill—will you be so kind as to state the best way of applying it, and the quantity necessary; the field is adjoining a creek, from which may be obtained marsh mud or swamp dirt—do you think the application of this around the corn would be worth the trouble of doing it?

By answering these enquiries through your valuable paper, you will not only oblige me, but many of your readers in this community.

Respectfully yours, C. R. B.

Replies by the Editor of the American Farmer.

Manuring in the hill alone is what we have ever been opposed to, as such applications are too partial to be of permanent benefit; but as our correspondent has not sufficient manure to give to his field a good dressing broadcast, we presume he must manure his corn in the hill as the next best thing. And as he designs using guano, and asks our views as to the quantity and mode of applying it, we will state that as he has a supply of marsh mud he had better mix 5 cart loads of that with 200 lbs. of guano, for each acre, incorporate the two well together, and apply a shovel full of the mixture to each hill of corn.—Should he have plaster at command, a bushel added to each of the above quantities will add to the value of the compost.

SHEEP HUSBANDRY IN THE SOUTH.

We have before us the above work, from the pen of Henry S. Randall, and published by John S. Skinner & Son. The name of the author is a guaranty of its character, for there is no man in our country more thoroughly versed in all that belongs to the management of sheep, and none who would address himself to his labor with more singleness of purpose, disinterested zeal, or enlightened forecast. But if we had not been familiar with the high-toned feelings of honor, the ripe scholarship, superior qualifications of Mr. Randall, the mere fact, that his book had been selected for publication by the senior editor of "The Plough, the Loom, and the Anvil," would have been a sufficient passport to our favor; for of all the men in America who have labored to elevate the agricultural interests and promote their welfare, his

claims are first in our humble opinion—first, because he is the pioneer in the glorious work; first, because he o'er-tops all others in his enlightened and long continued toils,—and first, because we know him to be as impartial as he has proven himself competent.

We have read the book from its beginning to its ending, and unhesitatingly say, that every breeder of sheep should purchase a copy—its teachings will not only make him a wise sheep-husband, but qualify him to judge correctly in every matter in which his interest in that connection may be concerned, whether it relates to the several breeds, their value for mutton, or for wool, their diseases and cures, and how they should be fed, whether for the shambles or for fleece, as well as their management throughout the seasons, and adaptation to particular latitudes.

HORTICULTURAL.

WORK IN THE GARDEN FOR MARCH.

Those who desire to enjoy the gratification of seeing their families supplied with early vegetables, must take immediate steps to lay the groundwork of raising plants. First in order, then, is

Sowing Seed.—Prepare a bed on a warm border, facing the South; cover it with about 2 inches of good stable manure; dig that in spade deep; rake fine, and divide your bed into compartments suitable to sow the different kinds of seeds, as, several kinds of early varieties of Cabbages, Lettuce, Tomatoes, Egg plants, Cauliflower, Broccoli. Rake the seed in lightly, and pat the earth down well with the back of your spade, so as to compress it and bring it into immediate contact with the several kinds of seeds.

When the plants come up, should they be attacked by lice, they may be removed by watering them with a decoction made of 4 oz. flour of sulphur and 1 gallon of soot, to be enclosed in a bag, on which four or five gallons of boiling water may have been poured, to be used when cool. The best time to water at this season is about noon. The above ingredients will bear two or three applications of boiling water, without losing its effective virtues.

Saltsy, or Vegetable Oyster.—Prepare a bed as you would for beets, and drill in seed of this fine vegetable, and you will be sure of a good crop.

Brussels' Sprouts.—Prepare a bed in the same manner as we have directed for early turnips, and sow the seed of this vegetable, and you will secure to your household a supply of sprouts only excelled by those of the cabbage. If you sow early this month, they will come in soon after the cabbage sprouts give out.

Early Peas.—As soon as the bed you design for early peas is dry enough to be dug well, manure it moderately; dig it up, with a narrow slice, to the full depth of the spade; let the raking be thorough; then lay it off into drills, four or five feet wide, according to the kind of pea you may plant, 2 inches deep; that done, drill in your peas tolerably thick, draw the dirt over them with your hoe, and compress the earth with the back of it. When your peas are up a few inches high, work them with the hoe, hauling the earth up to the vines, so as to hill them moderately. In two weeks more, give them another working, increasing the size of the hill; that done, stick them, and you need not fear a good and early yield.

You need not apprehend any danger from frost, as the pea is tenacious of life, and may, with safety, be put in the very moment the frost is out of the ground. Should frost or snow come after they are up, they will receive no injury.

Early Potatoes.—These may be planted the very moment the frost allows you an opportunity to spade up the ground.

Early Turnips.—These should be sown as soon as the frost is out of the ground. The best manure for them would be to prepare a compost of equal parts of well-rotted stable or barn yard manure, the scrapings of the yards or roads and woods mould. Mix these altogether, and add to the mass 2 bushels of ashes, 2 of bones, and 1 of lime; mix the whole together. Let this remain in pile while you are spading up the bed, which should receive two spadings; let the first be the full depth of the spade: the first raking completed, rake and then put on your compost, taking care to spread it equally; dig it in about 4 inches deep, rake and then sow the turnip seed, the early flat Dutch; rake it in lightly, and put the earth down. When the turnips first make their appearance, for three or four mornings in succession sow ashes or slacked lime over them. If you take this pains, a good and early crop of turnips will reward your care.

Spinach.—Prepare a bed by manuring freely, digging deep, and raking fine, and sow spinach seed: if you do, you will secure a supply of this delightful vegetable for your family.

Radishes.—The sooner you sow a bed of these, on a warm border, the better. The ground should be well manured with rotten dung, well dug, and thoroughly raked.

Beets, Carrots and Parsnips.—Prepare a bed by manuring with rotten dung, dig it up deeply, and rake it thoroughly: in this bed sow seeds of each of these roots, for early use. A small bed will answer for a family.

Rhubarb.—Procure a dozen or so of the plants of this excellent vegetable and set them out, to supply your table with tarts.

Gooseberries and Currants.—Dig and manure around the roots of these bushes; trim out their heads and keep the grass and weeds down, and you will be sure to have lots of fine fruit. If, however, you have none in your garden, see to it and have them planted therein, forthwith.

Raspberries.—Now is the time to clean, manure, and tie up your raspberries, as also to plant them if you have none in your garden.

Strawberries.—Clean off your strawberry beds and slightly dig in some well-rotted manure; then rake and lay fresh straw between the rows. If there are no strawberries in your garden, plant them without delay.

Asparagus.—Spread some well-rotted manure on your asparagus beds; fork it carefully in; then rake, and strew salt over them. Should you be without asparagus, procure plants from a nurseryman and set out a bed. No garden should be without this vegetable.

Celery.—Prepare a bed and sow celery seed for early use.

Roses, and other Shrub flowers.—All of these should be moderately manured and carefully spaded around. And if you have none in your garden, you should procure some of each kind, and plant them out, as no garden should be without such sources of pleasure and delight.

Grapes.—Manure your grape vines with a compost

made of 2 parts of woods mould, 1 part ashes, and 1 part bone dust: after mixing these ingredients together, apply a peck of the compost, broadcast, to each vine; dig it lightly in, and then rake the earth. If not done before, prune your vines, wipe the wound dry, and paint it with a mixture of oil and plaster. *Cuttings* should now be set out. It is also a good time to set out the vines.

Thyme, Sage, Parsley, Hyssop, and Herbs generally.—The seed of every thing of this description should now be sown. Roots of all may also be transplanted; and we will here observe that every garden should have a little plot of every kind of herb, medicinal as well as culinary.

Onions.—Sow onion seed early this month, and they will make large bulbs by August, provided they are planted in good, well-prepared ground—are thinned out, so as to stand 3 inches in 12 inch rows, and are kept clean. Onions raised from seed, will keep better than those grown from sets.

Onion bulbs should be set out as early this month as possible: and we desire you to bear in mind that the onion delights in a rich loam and bears manure well.

An opinion prevails, with some, that large onions cannot be grown from seed the first season; but this opinion is erroneous; for, if sown early, in well-manured, suitable soil, they will grow as large as from the sets, with this advantage, that they are not so subject to sprout as are those grown from the bulbs.

Seed Onions should be set out early.

Early Red Peppers.—For an early supply, sow some seed in a flower pot, which should be placed in the kitchen window or some equally warm place where the plants will be protected from the weather. By so doing, you will have plants ready to set out by the time you could sow the seed in the open air.

Seed Turnips.—Set these out as early as possible; be sure to set out large, well-shaped roots.

Horse Radish.—Among all the condiments of the table, there is none more grateful than that prepared from this excellent root; nor are there any so healthful. Therefore, if you have not already a bed of it in your garden, prepare one on some moist, rich, loamy border, and set out some, ten feet by four. A bed of this dimensions will give a full supply for all purposes. To ensure success, manure liberally, spade the ground up deep, rake thoroughly and plant early. The drills should be 18 inches apart—the roots 9 inches asunder.

Artichokes.—Sow the seed of this vegetable as early as possible this month.

Beans.—The *Mazagan, Lisbon* and *Windsor* beans may be planted any time after the middle of this month. The bean will grow in any soil moderately rich, but delights most in a clay mould, physically sound.

Flower Seeds and Bulbs, of most kinds, may be sown this month.

Fruit.—Look to the fruit trees in your garden; cut off any dead limbs neatly; dig in manure around the roots, and paint the trunks as recommended for those in the orchard. Plant any young fruit trees you design to set out as early as possible.

Fig Trees.—These may be either pruned or set out—the earlier, the better.

Having brought our *memoranda* to a close, we shall take the liberty of appealing to the ladies of each homestead, and to exhort them to insist upon their husbands providing them with such gardens as will inspire them with feelings of ambition and

pride. The care and superintendence of the garden naturally belongs to the matron: if it be not in good condition, her visitors charge it to her want of taste or energy; and, therefore, she has a right to expect that she be placed in a position to protect her from such invidious remarks; and this position she can never occupy, unless the means be furnished her to make her garden what it ought to be—a thing for her to be proud of, and one which her husband can love as the creation of his wife's taste, genius and energy.

There is another consideration which appeals to the womanly pride of the housewives of Maryland especially—to have their gardens in good order. The Maryland State Agricultural Society expects, through their zeal, that the *displays of FRUITS, FLOWERS and VEGETABLES*, at the next Fair, will excel, in magnitude and beauty, those of any other State in the Union. It is within the power of the ladies of Maryland to make it so; and we know their patriotism will impel them onward in a struggle so noble and so generous.

From the Horticulturist.

THE NATIONAL CONVENTION OF FRUIT GROWERS.

Since the publication of our last number, this convention met in New York, in accordance with the call made by committees, representing the Massachusetts and the Pennsylvania Horticultural Societies, and the American Institute.

Finding that the room, provided at Judson's Hotel, Broadway, was not large enough to accommodate the members assembled, with their large contributions of fruit, the convention was held in *Clinton Hall*.

It was by far the most important assemblage of horticulturists ever convened in the United States. Almost all the northern States were represented; and from as far west as St. Louis, delegates and presidents of the various horticultural societies, appeared and took part in the proceedings. Not only was almost every horticultural society in the country represented, but a large number of the leading agricultural societies sent delegates. We were much impressed by the concentration of pomological talent in the convention; nearly all the leading fruit growers and pomologists of the country being present.

Besides these, we noticed men distinguished in our public councils, or scientific halls—such as the Hon. J. C. GRAY, of Boston; THOS. ALLEN, Esq., of Missouri; Hon. JAMES ARNOLD, of New Bedford; Dr. HARE, of Philadelphia, etc., all of whom took an active part throughout the whole proceedings of the meeting.

Between two and three hundred members were present; men congregated from various parts of the Union, and bringing with them the results of varied experience, obtained by years of industry, in different soils, latitudes and localities.

The convention was opened on Tuesday, the 10th of October, by General TALLMADGE, the president of the American Institute, who was chosen temporary chairman, for the purpose of organizing the convention. On motion, a committee of nomination was appointed to *nominate officers* for the convention, consisting of Samuel Walker, of Massachusetts; S. B. Parsons, of New York; Thos. Hancock, of New Jersey; J. W. Hayes, of New Jersey; and Thomas Allen of Missouri. And, also, a *business committee*, consisting of J. J. Thomas, of Macedon, N. Y.; A. J. Downing, of Newburgh, N. Y.; R. S. Field, of Princeton, N. J.

A committee was also appointed to receive and arrange the specimens of fruit, brought by the members of the convention. This occupied the whole of the remainder of the first day; the quantity and variety of specimens, brought from all parts of the country, surpassing the expectations of all present, and exciting universal admiration. The pears and grapes from Massachusetts, and other parts of New England, and the superb apples from western New York and other parts of the country, placed side by side, spoke loudly, both of the skill of the cultivators, and the natural fertility of the soil in various parts of the country. It was allowed, by all present, to be the finest display of fruits ever made in the city of New York. Among the remarkable specimens, we noticed a basket of magnificent Onondaga pears, from western New York; another of Heath Clings, from the banks of the Hudson; beautiful Northern Spy apples, St. Martin's Quetsche plums, Aleppo grapes, and Beurre d'Anjou pears. The fair and delicious specimens of those old pears, the Brown Beurre, and Doyenne, abundantly supplied from the shores of Lake Ontario, were contrasted with the same varieties, almost worthless, from various other sections of the country, showing conclusively the importance of certain soils, either new or artificially produced, for old varieties.

The comparison of the various fruits, thus brought together from all parts of the country, was almost continually going on; a great many facts were elicited, many synonyms detected, and a large amount of information imparted privately, which will not, of course, appear in the report of proceedings. Indeed, brought in contact, as we especially were, with this phase of the convention, we could not but think that even if it had been productive of no other good than this private interchange of opinions, the session would have amply repaid the labors of all its members—so great was the union of knowledge possessed, and frankness in imparting it, displayed by all who were present.

The second day the convention organized, upon the report of the nominating committee, by electing unanimously the following officers: President, Marshal P. Wilder, of Massachusetts. Vice-Presidents, Dr. W. D. Brinckle, of Penn.; H. W. S. Cleveland, of New Jersey; Dr. R. T. Underhill, of New York; Henry S. Crapo, of Massachusetts; Dr. A. S. Munson, of Connecticut; J. A. McIntosh, of Ohio; Thos. Allen, of Mo.; M. Yardley Taylor, of Virginia; Lawrence Young, of Kentucky; Russell Mattison, of Vermont. Secretaries, S. B. Parsons, of New York; Geo. Deacon, of New Jersey; P. Barry, of New York.

Col. WILDER was conducted to the chair by Gen. TALLMADGE, when he opened the session with some excellent and appropriate remarks. He presided throughout with a dignity, urbanity, and knowledge of the business in hand, that gave the most complete satisfaction.

Among the first points of business, taken up the second day, was the appointment of the following *special fruit committee*:—A. J. Downing, of Newburgh, Chairman. J. J. Thomas, of Macedon, New York; R. Manning, of Salem, Mass.; Geo. Gabriel, of New-Haven; S. Walker, of Roxbury, Mass.; J. Lovett, of Beverly, Mass.; Thos. Hancock, of Burlington, N. J.; L. C. Eaton, of Providence, R. I.; H. W. S. Cleveland, of Burlington, N. J.

This committee was instructed to bring in a list of approved well known fruits for general cultivation. After considerable discussion, they submitted to the

convention a list, composed of only a few varieties, with a statement, that although many more fruits were equally deserving of a place in the list, yet from their value being as yet only fully ascertained in certain districts of the Union, the committee did not as yet consider it wise or prudent to recommend them for general cultivation. They deemed it proper to report a small list, and leave it to be enlarged by further action at a future convention.

The following is the SELECT LIST OF FRUITS FOR GENERAL CULTIVATION, as adopted, after critical examination, by the whole convention, viz:

APPLES.—Early Harvest, Large Yellow Bough, American Summer Pearmain, Summer Rose, Early Strawberry, Gravenstein, Fall Pippin, Rhode Island Greening, Baldwin, Roxbury Russett. *And, for particular localities*—Yellow Bellefleur, Esopus Spitzenburgh, Newton Pippin.

PEARS.—Madeleine, Dearborn's Seedling, Bloodgood, Tyson, Golden Beurre of Bilboa, Bartlett, Seckel, Flemish Beauty, Beurre Bosc, Winter Nelis, Beurre d'Arenberg. *And, for particular localities*—White Doyenne, Grey Doyenne.

PEACHES.—Grosse Mignonne, George IV, Coolidge's Favorite, Bergen's Yellow, Early York, *unrated*, Large Early York, Morris White, Oldmixon Freestone, Crawford's Late. *And, for particular localities*—Heath Cling.

PLUMS.—Jefferson, Green Gage, Washington, Purple Favorite, Purple Gage, Bleeker's Gage, Coe's Golden Drop, Frost Gage. *And, for particular localities*—Imperial Gage.

CHERRIES.—May Duke, Black Tartarian, Black Eagle, Bigarreau, or Grassion, Knight's Early Black, Downer's Late, Elton, Downton.

The question of a list of rejected fruits was also largely discussed by the convention, and referred to the committee, where it was determined that, though a measure of the greatest importance to fruit growers generally, it requires more time, and a more thorough trial of the inferior varieties; it was, therefore, deemed expedient not to report such rejected list till the next session of the convention.

A large part of this and the succeeding day's proceedings were occupied by discussions in open convention, touching the merits and the cultivation of a great number of varieties of new fruits. These discussions were in the highest degree interesting, since they embodied the practical knowledge of many of the best fruit growers and pomologists in the Union. Our present limits do not permit us to lay them before our readers; but they will be fully presented in the *Report*, soon to be published in pamphlet form for distribution; and we shall give a condensed view of some of the most important conclusions in our next number.*

Among the most interesting proceedings of the third day of the session, was the reading of essays by various gentlemen; among others, one by Dr. HARE, of Philadelphia, on the disease called the yellows in peach trees, and one by Dr. MUNSON, president of the New-Haven Horticultural Society, on the culture of the pear. The special fruit committee also examined all specimens of new seedling fruits brought before them, and reported on their qualities. Before adjourning, the convention decided that, in consideration of the growing importance of the culture of fruits in this country, and the increasing interest in pomological science, it should resolve

itself into a permanent body, and hold a session every year; that, since it is composed mainly of representatives from all the leading horticultural and agricultural societies in the Union, it shall take the title of the AMERICAN CONGRESS OF FRUIT-GROWERS; and that, to enable it to carry out the plans of the present session, the same officers should be continued in office throughout the next session.

It was also decided, in order to collect the largest possible amount of information on the subject of fruits, (ripening, as they do, at all seasons of the year,) that a GENERAL STANDING FRUIT COMMITTEE be appointed, to be composed of State fruit committees, (consisting of not more than five persons in each State, and the Canadas, represented,) with a chairman of the whole, and a chairman in every State; the president to be a member ex-officio; its investigations to be constantly going forward, and the reports of its correspondence and labors to be made at the next session of the congress, in the autumn of 1849.

GENERAL FRUIT COMMITTEE.

New York.—A. J. Downing, *Chairman of the whole*. J. J. Thomas, Macedon; Herman Wendell, Albany; P. Barry, Rochester; Benj. Hodge, Buffalo.

Massachusetts.—Samuel Walker, Boston; F. W. Maconday, Dorchester; P. B. Hovey, Cambridgeport; J. Lovett, Beverly; R. Manning, Salem.

Ohio.—J. A. McIntosh, Cleveland; A. H. Ernst, Cincinnati; S. P. Hildreth, Columbus; F. W. Scott, Toledo; T. H. Humrickhouse, Coshocton.

Pennsylvania.—Wm. D. Brinckle, Philadelphia; Thos. Hancock, Burlington, (N. J.); E. W. Keyser, Philadelphia; Thos. P. James, Philadelphia; Robt. Buist, Philadelphia.

New Jersey.—H. W. S. Cleveland, Burlington; Richard S. Field, Princeton; Isaac Pullen, Hightstown; J. W. Hayes, Newark; J. S. Chambers, Trenton.

Connecticut.—Geo. Gabriel, New-Haven; A. S. Munson, New-Haven; H. W. Terry, Hartford; Geo. Olmstead, East Hartford; V. M. Dow, New-Haven.

Vermont.—Russell Mattison, North Bennington; Chauncey Goodrich, Burlington; Martin Slocum, Manchester; B. F. Fay, Bennington.

Rhode Island.—L. C. Eaton, Providence; Stephen H. Smith, Smithfield; Alfred Smith, Newport; J. J. Stimson, Providence; — Comstock, Providence.

Maine.—Henry Little, Bangor; S. L. Goodale, Saco.

Maryland.—Samuel Feast, Baltimore; William Corse, Baltimore; Lloyd N. Rogers, Baltimore.

District of Columbia.—Joshua Pierce, Washington; J. F. Callan, Washington; Wm. Brackenbridge, Washington.

Delaware.—J. W. Thompson, Wilmington; Edward Tattnell, Wilmington; J. Canby, Wilmington.

Kentucky.—Lawrence Young, Louisville, Ward Brown, Frankfort; Henry Duncan, Fayette; Jas. Allen, Nelson; Geo. W. Weissenger, Louisville.

Illinois.—J. A. Kennicutt, Chicago; John S. Wright, Chicago; J. Y. Scammon, Chicago; W. Arnold, Alton; J. W. Turner, Jacksonville.

Indiana.—J. D. G. Nelson, Fort Wayne; D. Irvinghart, Logansport; — Scott, Madison.

* There is in France a body of cultivators of the vine, which assemble annually, called the *Congress of Vine-growers*.

† The gentlemen at the head of each State committee is chairman of the committee; and where there were not five members appointed, it was decided that he should be allowed to fill up the same.

* Copies of this Report will, we understand, be sent, as soon as published, to every delegate and member of the convention.

Missouri.—Thos. Allen, St. Louis; Lewis Bissnell, St. Louis; Jas. Sigerson, St. Louis; Nicholas Reihl, St. Louis; Emile Mallenchrodt, St. Louis.

Canada.—C. Beadle, St. Catharines; Jas. Dougal, Amherstburgh; Jno. Frothingham, Montreal; Geo. Leslie, Toronto.

By the aid of this committee, composed, as it is, of men of practical knowledge, the *Coxsack* or *Fruit-Growers* will, it is hoped, be able, at no very distant day, completely to achieve the important objects which the public has entrusted to its care. To do this, time, careful investigation, as well as active correspondence, and comparison of facts, are necessary. But these, we are satisfied, will not be wanting; and we confidently look forward to this body of practical cultivators, and scientific pomologists, to achieve what neither local societies nor experimental gardens can possibly achieve, in a country so broad and so varied in its soil and climate as the United States. We are satisfied, from what we saw of the intelligence and the admirable spirit which actuated the whole assembly at its first session, that it embodies the talent and experience necessary to bring about the desired results; and we congratulate the agricultural and horticultural interests of the country on the formation of an association, so pregnant with usefulness to every cultivator of the orchard or the garden.

The congress adjourned on the evening of Thursday, Oct. 12, after a most interesting session of three days; a session which will be long remembered by horticulturists, as, perhaps, the most intelligent, dignified, and satisfactory meeting of the kind ever held in the country—where the general spirit that pervaded it was the strongest desire for progress, in pomology and fruit culture, and the determination to sink all sectional feelings, and work together with one spirit to attain this result.

The next meeting of the *American Congress of Fruit-Growers* was fixed for the first Tuesday of October, 1849, in the city of New York.

Sowing Clover Seed.—If you have not already sown your clover seed, you should lose no time in doing so, after the ground is relieved from the frost, and take our word for it that you will advance your chances of success by rolling it in. Indeed, we would both harrow and roll after seeding, with the confident belief that we would not only secure a more certain growth of clover, but that we should benefit the wheat crop, by encouraging its tillering. In advocating the sowing of clover seed we are prompted to recommend its culture because we conscientiously believe that, without clover and lime, no permanent improvement of the soil can be effected, on any lands which may have been exhausted of its calcareous element, or, perchance, may not originally have had it. This opinion, thus incidentally advanced, forces us to the confession, that it is useless to sow clover seed on fields where the soils are destitute of lime, unless ashes or lime accompany such seeding.

Among numerous other communications on file, is one from the Hon. *Wm. Carmichael*, on the prevention of injury to agriculture by birds, insects, &c.—We sincerely regret our inability to give it in this No.

Clover Fields.—If you have any clover fields—and we trust you have—sow on every acre a bushel of Plaster. If you shall have discovered that plaster has ceased to be as operative as in former years, make a compost of equal parts of plaster, ashes and salt, mix the whole together, and sow two bushels on each acre.

The Hon. J. A. Pearce has consented to deliver an address before the Agricultural Society of Cecil Co., on the 4th of April next, at 4 o'clock, in the Court room in Elkton. Judge Chambers, if his health permits, is expected to attend, and will also address the meeting.

We have received a letter from the Hon. *Wilmington Newton*, of Va., making some statements of the farming operations of *E. Ruffin*, Esq., the well known distinguished editor of the *Farmers' Register*, and promising to furnish us with full details of his extraordinary success. Our readers may anticipate some valuable information from this source. Mr. Ruffin's nett profits have been not less than 15 per cent., and some years but little short of 20!

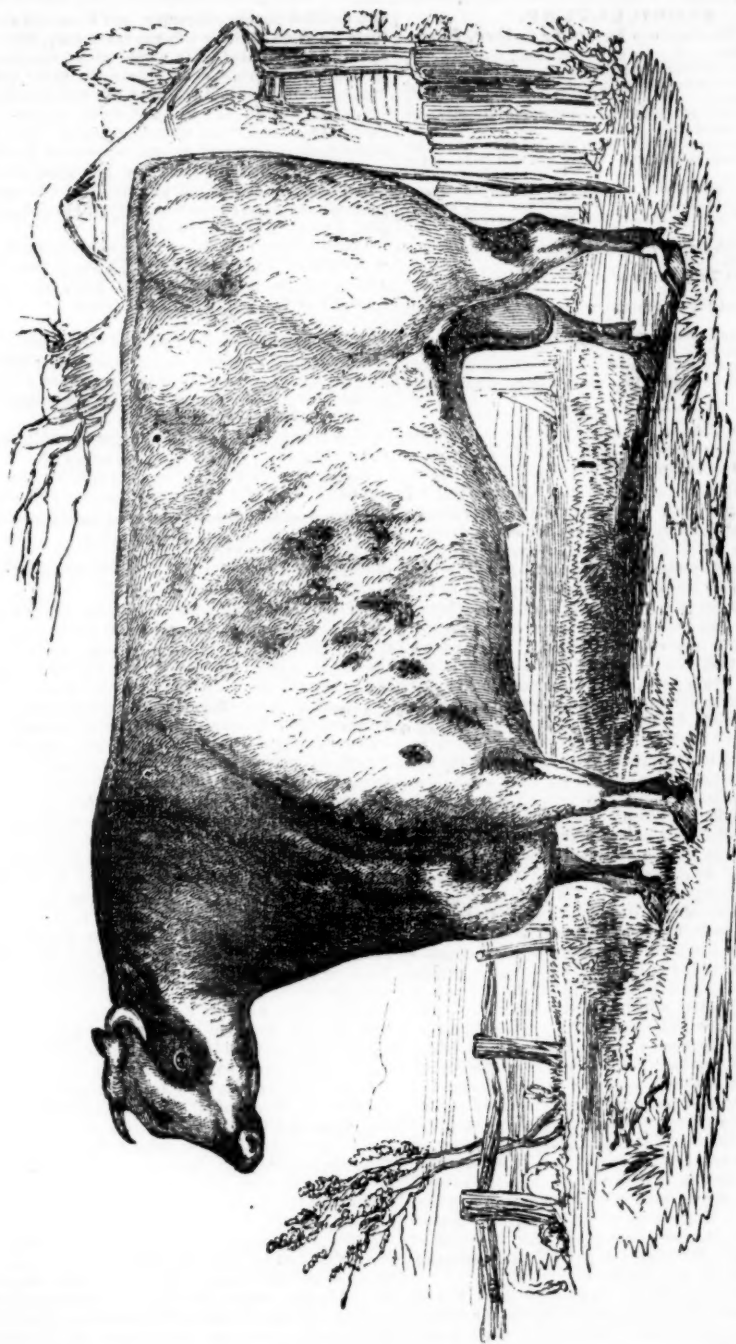
THE DUKE OF NORTHUMBERLAND.—The Portrait of this celebrated bull will be found on another page. There are a number of animals in Virginia that can trace their pedigree to the "*Duke*;" and we learn that the effects of the introduction of his stock have been very beneficial in the grazing districts of that State.

METEOROLOGICAL TABLE,

From the 19th of January to the 20th of February.
Kept at Schellman Hall, near Sykesville, Carroll County, Md.

Taken at 6 o'clock, a. m., 2 o'clock, noon, and at 6 o'clock.			
Wind.		Temperature	Remarks.
20	W	W	15 28 23
21	W	W	28 37 34
22	NW	NW	29 37 28
23	NW	NW	25 40 25
24	NW	NW	23 50 45
25	S	S	40 56 55
26	SW	SW	56 55 50
27	W	W	28 38 34
28	W	SW	22 37 35
29	W	W	34 46 45
30	W	W	49 51 41
31	NE	E	25 30 29
1	NE	NE	23 22 33
2	NE	SW	33 40 40
3	W	W	31 26 30
4	NW	SE	22 37 25
5	W	W	31 37 34
6	NW	NW	15 41 30
7	NW	NW	20 31 23
8	NW	W	3 24 25
9	W	W	28 33 24
10	W	S	13 32 29
11	SW	SW	18 47 29
12	NE	W	30 33 27
13	NW	E	8 30 27
14	W	W	12 24 24
15	SW	NW	15 23 15
16	W	W	25 15
17	E	E	6 27 18
18	NW	NW	11 26 20
19	W	SW	14 26 19
*5 below zero.			

30th of Jan. Crocuses and Hyacinths in bloom, in the garden, those that had not been covered.



SHORT-HORN BULL DUKE OF NORTHUMBERLAND.

FLORICULTURE.

Prepared for the American Farmer, by S. Feast, Florist.

Camellias will now be making their growth; syringe freely, and keep the soil liberally watered.

Araleas, will now be flowering, and will require increased supplies of water.

Verbenas in small pots, should be repotted, and their branches tied neatly to stakes.

Pelargoniums showing flower buds should have plenty of air and water—attend to fumigation on the first appearance of the Green Fly.

Roses in pots now blooming, should receive moderate supplies of water, and plenty of air—fumigate when they need it.

Cactuses will now be coming into bloom, and will require more water.

Hardy Annuals for early bloom, sow as soon as the frost is over as possible.

Hyacinth and Tulip beds may be uncovered about the last of this month.

Tender Annual Flower Seeds should be sown as directed last month.

Carnations, and other Plants in frames, should have plenty of air every fine day.

Roses, Honeysuckles, Grape Vines, &c. should be pruned and trained, before dressing the borders, the latter part of this month.

Review of the Tobacco and Grain Markets, reported for the "American Farmer," by J. W. & E. Reynolds, Farmers and Planters' Agents, March 1st, 1849.

The month now just closed has been marked by great dullness in both the tobacco and grain markets, but more particularly of the former, as the inspections, at this period of the year, amount to almost, we might literally say, nothing, as a large proportion of the very small weekly inspections, reported by the inspectors recently, are merely a re-inspection of tobacco that has been before entered on the inspection books and inspected in former years: and we might add, that this has been the practice, in the beginning of every year, for several years past; and it is not done to deceive the purchasers, as might at first be supposed; for but few agents could be found, even if they desired such a thing, who would have the hardihood to attempt such a thing upon the ASSURE PURCHASER, who, although he knows but little of the cultivation of the weed, yet, after it is cultivated and packed, no horn worm, of the most refined taste, ever understood its peculiar quality and sweetness, in its green state, better than does the "penetrating german," in its dry state. But the disadvantage of this re-inspection is, that it has a tendency of making our statistics of the growth of Maryland tobacco, each year, VERY UNCERTAIN, as all tobacco inspected, for instance, in the year 1848, is counted as the growth of 1849; and that inspected in 1849, is put down as the growth of 1847, and so on; and in this way the growth of Maryland tobacco has been estimated at from 2,000 to 3,000 hogheads larger than it really has been for several years past. The real object of reinspection is to see how the article has kept, and restore confidence in it on the part of the purchaser, and the consequent increased probability, in many cases, of obtaining fairer prices; but it is of little use in the common qualities. The crops to come to market, this year, is said to be superior, in "color," to any that we have had for several years: if so, it will operate very favorably on prices, as there is a large stock of very common tobacco now on hand, and very little good; and it may afford an opportunity for agents to get off their common stock at, perhaps, fairer rates.

The writer has recently returned from a visit through a part of the tobacco section, and the quality of the last year's growth is apparently much better than usual. We are sorry to state that the accounts from Europe, since our last monthly review, are not

of a decided pacific character, and there are at least room for fears that the tobacco trade may, this year, again be interrupted. We would advise our planters to divide their crops equally between grain and tobacco, so far, at least, as their lands will admit of it, but, at all events, not to plant more tobacco than they have done for the two last years. We quote common dark crop and second tobacco at 2½ to \$3; good crop, 3½ to \$4½; good and fine reds, 5 to \$8; ground leaf, 2½ to \$7, as per quality. Ohio fair to good red, 4½ to \$9; fine wrapper, 12 to \$18; spangled, 6 to \$10; yellow, 10 to \$15.

GRAIN.—Receipts small; we quote common red wheat, 95 to 100 c.; prime red, 1.06 to \$1.10; white, 1.06 to \$1.15. Oats, 28 to 30. Rye, 60. White Corn, 44 to 46; yellow, 50 to 51 cents.

At the meeting of the Board of Managers of the State Society, a paper was presented and read from Mr. Fisher, the consignee of the cargoes of Peruvian guano now in this market, stating the terms upon which it will be sold, as follows:

50 tons or upwards, \$45 84-100, per ton of 2,240 lbs. 10 to 50 tons, 50 84-100, per ton of " "

A less quantity than 20 tons not offered. Smaller lots can be had of dealers at \$51 per ton of 2,000 lbs.

CHEMICAL MANURE,

Manufactured by the "George Bommer New York Manure Company."

THIS Manure is made chiefly of Fecal matter from the sinks, in which is mixed a small portion of substances that are of themselves powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly in proportion to the requirements of the plants, and therefore, produce its effects for a time equal to that of farm manure.—This process was at length discovered by the French Chemists, and is now practically carried out with complete success in more than sixty of the large cities in France, where such factories are in full operation.

The "G. B. N. Y. M. Co." has established a Factory, on an extensive scale, near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal troublesome and laborious.

The manufacturing department is under the special charge of George Bommer, esq., who has a perfect scientific and practical knowledge of manure matters generally, and the company has established a standard for the strength of its manure from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it. Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels or 36 to 45 bushels spread broadcast. Applied in hills, one half of this quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany every parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another, known under the name of "Poudrette," although the principal component of ours (the Fecal matter) is the same as that which is used in poudrette in a much less proportion; our auxiliary substances, as well as our manufacturing process, are altogether of a different nature and kind.

It belongs not to us to eulogize further the quality of our manure, what we desire at present is, to call upon the members of the agricultural community to try it! and we have reasons to assure them, that they will find it the most profitable manure they ever used.

Price, taken at the Factory :

37½ cents per bushel, without package; 50 cents per bushel, packed in barrels; or, \$1.50 per barrel, package included.

Orders addressed to the above company at this office, 72 Greenwich-st., New York, will be promptly attended to.

By order of the Board of Directors,
GEORGE BOMMER, Director.

New York, January, 1849.

The Factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards. Feb. 1-1f.

FENCING—FENCING.—The undersigned is now prepared to furnish the entire apparatus, or any part of the machinery, exhibited in operation at the late Fair of the Maryland Institute, and the State Agricultural Exhibition, for the manufacture of the new, beautiful and highly economical kind of fencing, figured and described in the August No. of this Journal, for 1847—together with the Patent Right for any of the counties of this State, upon reasonable terms, to such as desire, except those of Frederick, Washington, Carroll, Montgomery, Prince George's, Baltimore and Kent—also, for the entire territory of Virginia, or any part of it—likewise for any of the Southern States except Kentucky—See the reports of committees published in the late December No. of the American Farmer. C. COLEMAN.

Mt. Pleasant, Frederick county, Md., Feb. 1849. 11-mh.1.

PLUGHS!!



The subscriber is manufacturing Ploughs of various patterns and of different sizes; also Wheat Fans, Cylindrical Straw Cutters, Corn and Tobacco Cultivators, CORN SHELLERS, &c. Also,

THRESHING MACHINES and HORSE POWERS—these latter are used by the following gentlemen, to whom reference is made, as to their superior value, viz: Messrs. T. Beard, Th. Beard, Dr. Watkins, J. T. Hodges, T. Welsh, W. Mackall, J. Ingelhart, A. Sellman, R. Sellman, W. Hopkins, J. Kent, Geo. Wells, Geo. Gale, Dr. Fenwick, A. Franklin, J. C. Weems, of Anne Arundel county; G. W. Weems, J. T. Barber, R. B. Chew, W. Howsell, Y. Howes, of Calvert co. Md. Agent of Evans Davis, Baltimore co. for sale of the woodcock Plow. Pennsylvania Grain Cradles. CHAS. H. DRYEY.

Gillingham Alley, entrance from Howard-st., near Pratt, mal and store, Hollingsworth-st. corner Pratt.

LIME—LIME—The subscriber is prepared to furnish from his depot at the City Block, Baltimore, ALUM STONE LIME of the purest description, deliverable at any point on the Chesapeake Bay or its tributaries, at such prices as cannot fail to please.

He is also prepared to furnish superior building Lime at 25c. per bushel, in hds., or at \$1 per bbl. E. J. COOPER, July 1 City Block, Baltimore.

Hussey's Reaping Machine.

THE increasing demand for this implement has induced the subscriber to make larger preparations for the harvest than in any previous year, yet it will be necessary in order to avoid disappointment, that farmers send in their orders at an early day. OBED HUSSEY.

Baltimore, January 18, 1849.

Feb. 1

Circular to the Farmers of Maryland.

YOUR attention is called to a new article of Manure, manufactured in Baltimore, known as **CHAPPELL'S FERTILIZER, OR AGRICULTURAL SALTS**. This article is composed of the same materials as are found by analysis in the ash of plants. It consists of a mixture (in proper proportions) of *Bi Phosphate of Lime, and Magnesia* (or bones dissolved in sulphuric acid,) *Sulphates of Ammonia, Potash, Soda, and Lime, Animal Charcoal, Silicates of Potash, Alumina and Magnesia*, and, as these constituents indicate, is intended to restore to the soil, all the inorganic materials abstracted by vegetation. It has been ascertained that a soil containing a sufficient quantity of these salts, is always fertile; and their absence constitutes what is called "*Worn-out Land*." The analysis of rich soils show a good supply, and poor land a deficiency.

The inorganic matter abstracted from the soil by the growth of different crops is the same, varying only in proportion, it is therefore evident that if we supply to the soil a sufficient quantity of each material thus abstracted, we restore its fertility.

The correctness of the above, has been fully sustained by the use of the agricultural salts, the last season. It has been used on *poor land*, and 25 to 28 bushels of wheat obtained, with a superior crop of clover. As a top dressing on wheat, 8 bushels additional has been realized. On the spring crops, of corn, oats and clover, the yield has been doubled.—It has been used on the same field, (as an experiment) with the best Peruvian Guano both on corn and oats, and the yield has resulted in favor of the Fertilizer. The most respectable reference can be given of its value and effects on poor land.

This article having been used with such favorable results, the manufacturer now offers it to agriculturists with the full confidence that it will largely repay for the outlay, and that it is the cheapest manure they can use.

On very poor land 2 barrels to the acre should be applied, on that in better condition, one, to one and a half barrels. It is calculated in using two barrels you supply to the soil sufficient salts for a rotation—as a top dressing, one barrel put on after a rain, or when the land is wet, and in all cases near the surface, and not ploughed in, broadcast and harrowed when practicable. The Ammonia in this preparation is a Sulphate, and therefore not volatile as in Guano, the Bi Phosphates being soluble,—the rain dissolves them, and they thus saturate the soil with prepared food, ready for the nourishment of the plant; being rich in Sulphates, they are powerful absorbents of ammonia from the atmosphere.

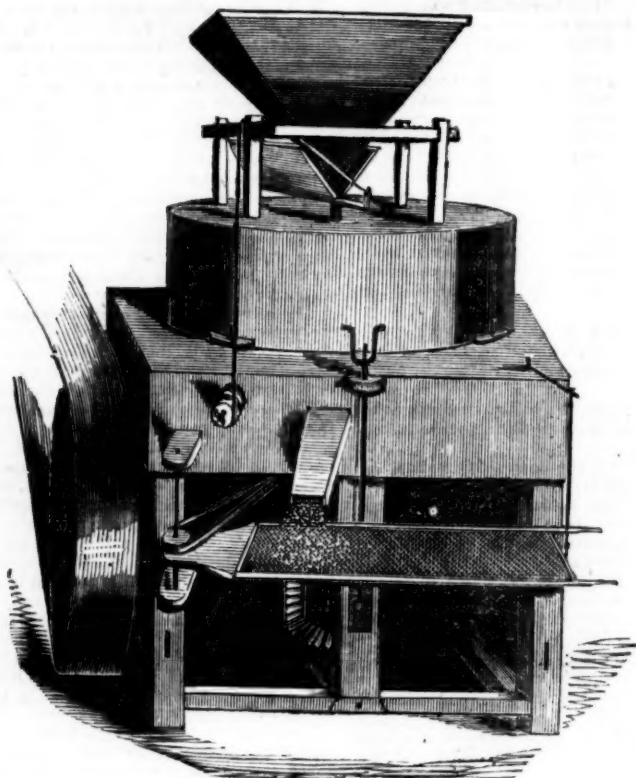
As this Fertilizer can be manufactured only to a limited extent, and as the demand during the seedling season, during last fall, was much greater than could be supplied, it would be advisable for those who may wish to obtain a supply in time, to send in their orders and purchase at once.

Price \$20 per ton of 2000 lbs. put up in barrels, of 300 lbs. each. Terms, cash on delivery. Address, P. S. CHAPPELL, Chemist, Baltimore.

Note.—Guano is deficient in alkalies and sulphates—this preparation has a sufficient supply, and for this reason on some soils, is superior to it for producing large crops. *Potent Right secured.* feb 1

FOR SALE.—100 bushels of BONE SHAVINGS—by E. BALL, feb 1-1f East Falls Avenue, near the Bridge, Baltimore.

DRURY'S HORSE POWER GRIST MILL.



THE above cut represents Charles H. Drury's Horse Power Grist Mill, which was published in the American Farmer one year ago; they have been in use ever since, as the annexed certificates will show:

WEST RIVER, January 30, 1849.

Mr. Charles H. Drury—Sir: I have used your mill for more than a year, and it still continues to give entire satisfaction. I grind once a fortnight fourteen bushels of corn, yielding from seventeen to seventeen and a half bushels of good meal, at the rate of four bushels per hour with five horses.

Your horse power I also consider the best I have ever seen. I am, very respectfully,

J. THOMAS.

Having used your mill the same length of time

Mr. Thomas has, I fully concur in the opinion he has expressed in regard to it, and your horse-powers, in all its particulars.

THOMAS J. HALL,

To Mr. Chas. H. Drury. Light-st. Wharf.

Persons in want of such an article are referred to either of the above gentlemen, or to Dr. James Cheston, Mr. Sprigg Harwood, of Anne Arundel county, or to Mr. Y. D. Hance, of Calvert county, or Mr. John Hamilton, of Charles county. One may be seen soon at Mr. M. B. Carroll's, Prince George's county, near Nottingham.

C. H. DRURY.

With whom may be found Horse Powers, Threshing Machines, Wheat Fans, Corn Shellers, Straw Cutters, Grain Cradles, Plows, Harrows, Cultivators, &c. &c. Hollingsworth-street, corner of Pratt.

Baltimore, March, 1849.

mh 1

A. G. MOTT,

MANUFACTURER OF
FLOWS, HARROWS, CULTIVATORS, GRAIN
CRADLES, WHEAT FANS, CORN SHELLERS CYLIN-
DRICAL STRAW CUTTERS, &c. &c.

Plow Castings, of the New York composition chilled metal, always on hand, and old implements repaired, at No. 38 ENSOR STREET, adjoining the Bel-air Market, Baltimore. Jan 1

LIME AND MARL,

THEIR Agricultural uses, with explanations of their properties and management, the soils to which they are applicable, and the precautions to be observed in their use, especially adapted to the wants of practical farmers—by JAMES HYATT, Chemist of Mt. Airy Agricultural Institute, Germantown, Pa. Copies of this treatise, more particularly noticed in the American Farmer, of Nov. last, can be had of SAMUEL SANDS, Office of the American Farmer, 12½ cents per copy. It can be sent by mail to any post office. feb. 1.



THE MOORE & CHAMBERLAIN PLOW.

We have witnessed the working of one of your Moore & Chamberlain's Plows as exhibited lately on the farm of Thos. P. Stabler, of Montgomery county. We hereby certify that in our judgment the work was performed in the best manner, the draft appearing light and the plow working with great ease to the plowman, as well as to the team.

WILLIAM B. MAGRUDER, GASSAWAY WATKINS,
RICHARD BROOKE, GEORGE E. BROOKE,
ENOCH B. HUTTON, JAMES STABLER,
JOSIAH W. JONES, To N. U. Mott, of Balt.

The Moore & Chamberlain Plow can be had only of N. U. Mott.



E. WHITMAN,

Will offer for sale this season, the largest Stock of

Agricultural Implements and Seeds,

Ever found in an Agricultural Warehouse in the City of Baltimore; consisting in part of

- 100 Whitman's Premium Wrought Iron Rail-way Horse-powers. Price of the Double Power, \$100, single ditto \$75.
- 100 Various kinds of Sweep Horse-powers, viz: Fitz', Allen's, Kirkpatrick's and others, from \$65 to \$120.
- 200 Whitman's Improved Threshers The cylinder of this machine will last 100 years, in constant use. Price, \$45 to \$50. If the Straw Carrier is attached, \$15 will be added; and if made to thresh and clean at one operation, price \$100.
- 50 Common Threshers, as low as can be purchased in any part of the country.

6,000 PLOUGHS,

Consisting of every kind sold in Maryland, New York, and Massachusetts. The first Premium on Ploughs in the Ploughing Match of the State Fair, holden at Baltimore, last November, was looked upon as a matter of great importance to every one engaged in agriculture; and this made the contest a spirited one, and brought in ploughs from all parts of the country, among which was the Wiley, Moore & Chamberlain, "Maryland Self-sharpener," and a host of others. The Committee, after trial, had no hesitation in awarding the first premium to E. Whitman, Jr., for the work done with his Prouty & Mears' Centre-draft Plough.

- 300 Cultivators, which also received the first premium at the State Fair and at various other Fairs. Price, \$4 to \$6.
- 50 Corn and Cob Crushers, which received the first Premium at the State Fair, and also at the Fair of the Maryland Institute, and at various other Fairs. Price, \$50.
- 200 Wheat Fans, of various kinds and putters, among which is I. T. Grant's, which is now used in this country and in Europe with great success; and we consider it the best Fan in use. Price, from \$25 to \$40.
- 500 Whitman's Premium Corn Shellers. Price, \$10, \$16, \$30.
- 200 Straw Cutters, from \$7 to \$45.
- 500 Premium Churns, from \$2.50 to \$7.
- 50 Corn Planters. One boy and horse with this drill will plant 10 acres per day. Price, \$20.
- 50 Cider Mills. These mills grind the apple to a pulp, and are warranted to produce more cider, and of better quality, than any other mill. Price \$30 and \$25.

A large stock of Wheat Drills, Hay Presses, Gold Washers, and all kinds of Plough Castings, Grain Cradles, Shovels, Hoes, Spades, &c. &c. E. WHITMAN, JR.,
Corner of Light and Pratt streets,
Baltimore, Md.

maul

WHITE MERCER POTATOES—A NEW VARIETY.—These potatoes were originally grown by a gentleman in New Jersey from seed of the Mercer. It is a superior variety both for early and late planting. And so far has not suffered from the hollow heart, incident to the old variety. A sample may be seen at this office. Persons wishing to procure seed will leave their orders. Price \$1.25 per bushel.
mh-l. S. SANDS.

FLOWER SEEDS.—Just received a supply of FLOWER SEEDS, of every variety, which will be sold wholesale and Retail, by SAMUEL SANDS,
At the Agricultural Society's Rooms, Baltimore-street.

GUANO.

1000 TONS BEST PERUVIAN GUANO, just received from the Chinche Islands.

Also, **PATAGONIAN AND AFRICAN GUANO**, in large or small quantities to suit purchasers.

We recommend to the farmers and planters to form associations for the purchase of guano in larger quantities than they can do singly. Their interest is concerned in buying directly from the port where it is imported, in large quantities, and from such dealers as they can rely upon.

A. B. ALLEN & CO.,

189 and 191 Water street, New York.

Jan 1st

PREMIUM THRESHER AND CLEANER.

FARMERS who want their wheat threshed, cleaned and screened at one and the same operation, with more economy of wheat, time and power, and also perfection of apparatus, than that done by any other machine of the same cost, now known, would do well to send on their orders without delay, remembering the shop rule, "first come first served;" we, however, hereby promise to make every effort to supply our customers with machines, which for workmanship and judicious arrangement, founded upon principles at once plain, simple and practical, being easily used by ordinary farm hands.

We will deliver a Thresher, with its attachments for cleaning and screening, similar to the one which took the 1st premium (and that by universal consent,) at the last Exhibition, in the city of Baltimore, or at an equal distance in other directions from our shop for \$110, or at the shop for \$100.

Since the Fair we have made an improvement in the tread power, (which we purpose patenting,) by which one-third more power can be gained from the same weight of horses.—This superior Power will be furnished as above for 2 horses for \$100, and for 3 horses \$110. With the latter power from 25 to 35 bushels Wheat can be threshed, cleaned and bagged per hour. We are about getting up a set of patterns for Lever Powers, which we warrant a decided improvement in said powers, which will be delivered in Baltimore, for \$70, or at the shop at \$65.

Persons who have Water Power, by using our Thresher and Cleaner can have a splendid threshing arrangement.

ATLEE & BLYTHE, New Windsor, Carroll Co., Md.

GOLD WASHING MACHINES.

(LEAVENWORTH'S PATENT.)

THE superiority of these machines over all others is, that the Gold, Platina, Cinnabar, (ore of Quicksilver,) and black sand, (containing a large per centage in gold) cannot escape; and that the gravel and dirt pass off without detention.—These machines will perform more and better work than any other ever constructed. They may be operated by hand, horse, water or steam power. Price of hand Machines, \$25 to \$35 each; horse power machines, \$50 each. Additional sieves, castings, irons, and boxing extra.

In addition to the above, emigrants to California, will find at our Warehouse a large and complete assortment of the best and most recently constructed mining tools of all kinds; smelting and assaying apparatus, crucibles and retorts, with printed directions for using, Pumps and Hose, Whitney's celebrated Rifles, Wagons, Carts and Wheelbarrows, Agricultural Implements, Field and Garden Seeds, &c. &c., at the lowest prices.

The public are cautioned against purchasing Gold Machines, imitations and counterfeits of Mr. Leavenworth's patent, as he has directed his Agent at San Francisco, E. Crosby, Esq. to enjoin all persons from using such on their arrival at California.

A. B. ALLEN & CO. 189 and 191 Water-st., New York.

Feb 1-2t

ORANGE SEED.—Persons wishing to obtain a supply of this Seed, can be furnished at this Office, at the reduced rate of \$2 per quart. decl

Warranted French Burr Mill Stones.

COLOGNE, COCALICO, & ESOPUS do., French BURR BLOCKS, and CALCINED PLASTER.—The subscribers beg leave to inform their customers and the public, that they are prepared to furnish the above articles, of best quality, at the shortest possible notice. They continue to import French Burr Blocks, selected by one of the firm at the quarries in France.

Orders from any part of the United States, accompanied with satisfactory references, will be promptly attended to.

EGENTON, MORRIS & CO.,

West Falls Avenue, near Pratt-st. Bridge, Baltimore, Md.

Feb. 1-2t

A GOOD BOOK COMING!

COLE'S

AMERICAN FRUIT BOOK.

S. W. COLE, Esq., Author of the popular work entitled *The American Veterinarian*, of which 22,000 copies have already been published, has, after years of patient labor and close investigation, completed his great work, entitled *Cole's American Fruit Book*: A work which we believe is destined to have a more widely extended circulation than any similar work, ever before offered to the American public. We believe so for the following reasons:

FIRST, It is a mature work and a practical one, one on which Mr. Cole has spent many years of study and close examination, and knowing the wants of the community has met those wants, in a plain, concise and familiar manner, avoiding technicalities, and ultra scientific specifications and definitions, useful only to the few, he has made a work intelligible to all. It will be emphatically a book for

THE PEOPLE.

SECONDLY, It will have an unprecedented sale on account of its cheapness. It will make a volume of 288 closely printed pages. Illustrated with over one hundred beautifully executed engravings, by Brown, and will be sold for 50 cents, firmly bound in Leather, and 62½ cents in Fancy Cloth, with gilt backs. It will contain full directions for Raising, Propagating and Managing Fruit Trees, Shrubs and Plants, with a description of the best varieties of FRUIT, embracing several new and valuable kinds; embellished with Engravings, and outlines of FRUIT TREES, and various other designs. Emphatically a

Book for Everybody.

As well for the man who eats Fruit, as for him who raises it. This valuable work will be published early in February.

100 AGENTS,

Active, intelligent, and honest, are wanted, to sell this book, in every State in the Union. A cash capital of from \$25 to \$50 will be necessary. Address, (post paid) the publishers,

John P. Jewett & Co.

23 CORNHILL, BOSTON.

A rare chance for Agents to make money.

CUSHING & BROTHER, Baltimore,

Are General Agents for the Publishers, for the State of Maryland. Feb. 1. 3t

The above work will be on sale at the Office of the *American Farmer*.

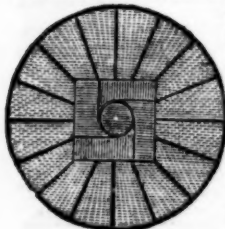
LIME—LIME—The subscriber is prepared to furnish from his depot at the City Block, Baltimore, **ALUM STONE LIME** of the purest description, deliverable at any point on the Chesapeake Bay or its tributaries, at such prices as cannot fail to please.

He is also prepared to furnish superior building Lime at 25c. per bushel, in hds., or at \$1 per bbl. E. J. COOPER, July 1 City Block, Baltimore.

PERUVIAN GUANO.

THE cargoes of the ships Xylon and Deucalion of direct importation into this port, and found by the State Inspector to be of the very best quality. This Guano has been put in good new Cotton Osanburg bags. For sale by

Feb 1. JAMES I. FISHER, No. 76 Spear's Wharf.



THE "Simon pure," and invincible WILEY FLOW still in the field—A. G. MOTT, at No. 38 ENSOR STREET, near the Bel-air Market—Manufacturer and Vender of Implements of Husbandry, viz. *Plows, Harrows, Cultivators, Grain Cradles, Wheat-Fans, Corn-Shellers, Straw-Cutters, Endless cania Horse-Powers, Threshing Machines, &c. &c.*—through this medium, would apprise the agricultural community of the fact, that he is the only manufacturer in the "Monumental city" of the *exquisite WILEY FLOW*, (right and left hand) composed of the real "Simon pure" and justly celebrated New York composition, chilled castings, the points of which, are warranted to stand the most rugged soil equal to steel, at a cost of about two cents per acre, for blacksmith's bill.—If you are for bargains, call, or send your orders, for he guarantees his implements good as the best, and cheap as the cheapest, for cash, and delivered in any part of the town free of charge.

SADDLE, HARNESS AND TRUNK MANUFACTORY.

THE subscribers—who, at the late Fair of the Maryland Institute, received the first premiums for articles in their line of business, on exhibition—offer for sale a fine assortment of Ladies' and Gentlemen's SADDLES, Coach, Wagon and Cart HARNESS, Bridles, Whips, Collars and Harness, Trunks, Carpet Bags, Shot and Bird Bags, &c., &c., on terms fully as cheap as the same quality can be obtained in the city.

They particularly recommend their Spring Saddles for comfort to the rider and safety to the horses.

S. & T. T. HUNT,

Jan 3m 167 Baltimore street.

FIVE THOUSAND PLOWS

OF upwards of sixty different sizes and patterns, for sale, together with a large and complete assortment of the various kinds of Agricultural and Horticultural Implements.—Also FIELD AND GARDEN SEEDS of the best qualities. A Catalogue of the above Implements, Seeds, &c. of 100 pages, will be sent gratis, when requested, post paid.

A. B. ALLEN & CO.

189 and 191 Water-st., New York.

Feb. 1-2t.

ASPHALTED ROOFING FELT.—This felt is highly recommended as a durable roofing for houses, as also for the use of railways, and for sheeting ship bottoms. It is much used in England, where it is patented, and testimonials can be produced of the high estimation in which it is held in that country. Further particulars can be had of the subscribers, who will receive orders for the supply of the article. A sample is also left at the office of the American Farmer.

nov. 1

GUEST & GILMORE, Baltimore.

PLOUGHS, PLOUGHS, PLOUGHS,

And all kinds of Agricultural Implements and Machinery manufactured of the very best materials. Being a practical workman myself, I feel safe in saying I warrant all articles purchased at my establishment. I still manufacture the Wiley, Empire, Minor & Horton, and the Delaware Premium Ploughs, both right and left hand. I am sole Agent for the sale and manufacture of Moor & Chamberlain's Delaware Premium Ploughs. Those ploughs took the first and second premiums, by N. U. Mott, at the Maryland State Fair, held at Fairmount, on the 9th and 10th of the 11th month, 1848, over numbers of competitors. This plough is the lightest draught plough, by near 200 lbs., than any other plough in use. I am also Agent for Pennock's Patent Pennsylvania Pioneer Wheat Drill, for Wheat, Corn or Oats—considered the best and most perfect Drill in use. I also manufacture and keep for sale N. U. Mott's premium Hinge Harrow, a good article, and the Moore & Chamberlain's Patent Hollow-shank Steel Cultivator Teeth, a superior article; Edge T. Cope's Endless-Chain Horse Powers and Threshing Machines and Separators, Corn Shellers, Straw Cutters, Wheat Fans, Harrows, Cultivators, and all articles used in the farming line. Being a practical workman myself, and paying strict attention to my business, and using the best of materials, I warrant all articles. Call and see for yourselves. Thankful for past favors, I shall endeavor to merit a continuance of the same.

NICHOLAS U. MOTT,

Paca street, 5th door from the Lexington Market, and adjoining the Hand Tavern.

N. B. All orders addressed to N. U. Mott, Paca street, will meet with immediate attention. decl

LIME.

THE subscribers are prepared to furnish Building and Agricultural Lime at the depot on the Back Basin, corner of Eden and Lancaster-sts., which they will warrant to give satisfaction, it being burnt from pure Alum Lime Stone, equal to any found in the United States. Orders may be left with WILLIAM ROBINSON, No. 15 Hollingsworth-street, near Pratt.

feb. 1-4f.

FELL & ROBINSON City Block

Horse Powers, Threshing Machines, Ploughs, &c.

FOR SALE AT LESS THAN FIRST COST.

THE subscriber advertised his entire stock of Implements for sale at auction, to take place at the late State Agricultural Fair, held in this city, but not being permitted to make the sale till Saturday, the last day of the Fair, when the visitors had mostly left the city, he did not accomplish his object. He has on hand about 60 Ploughs, several Horse Powers and Threshing Machines. Of his own patent Iron Frame Cylindrical Straw Cutter, all with extra knives, and two of them his 20 inch size, fitted for hand or horse power, revolving bottoms and capable of cutting 2000 bushels of straw per day; a Wheat Fan, and a Fan for cleaning Clover seed, Corn and Cob Grinders, and many other articles, all made in a faithful manner, and of the best materials, all of which he will sell for less than the first cost, as he has no room to store them.—He has also for sale very low, Lathes, one very large for turning, boring and chucking; a Blacksmith's Bellows, (which has never been used), Anvil, and a great quantity of Tongues and Hending Tools, Sledges, &c.; one Trip Hammer, from the Messrs. Denmeads; Patterns with dies, &c.; one Hoisting Wheel, Grind Stones and Grind Stone Frames; a great variety of Moulding Flasks; a great variety of Plough Patterns, ground and finished in the best manner, with follow-board of superior quality. Also Patterns for Horse Powers, Corn Shellers, &c. all of which will be sold at far less than they can be made.—All persons writing for information are expected to pay their postage.

dec 1

J. S. EASTMAN,

In the rear of 180 West Pratt Street.

MOBILE SEED STORE.

AGRICULTURAL AND HORTICULTURAL MANUFACTURERS' AGENTS for the Sale of Plows, Straw Cutters, Corn Shellers, Harrows, Cultivators, Seed Planters, Water Rains, &c. The undersigned have been for many years devoted to the advancement of Agricultural, Horticultural, and other scientific pursuits, for which a taste is advancing in this State rapidly, and beyond any other period of its existence; and aware of the want of an Agent located in Mobile, in whose judgment in such matters, the citizens of this and the adjoining State, and the proprietors can have confidence, and who would take a direct and personal interest in furthering the introduction of approved Agricultural and Horticultural implements, tools and machinery, we are induced to open an Agency in this city, devoted to these branches alone. From our knowledge of, and acquaintance with the Planters of Alabama and Mississippi, we are enabled to offer greater inducements and facilities to Patrons and Inventors for the sale of their articles than can be obtained elsewhere. We will open an exclusive

AGRICULTURAL AGENCY WAREHOUSE IN MOBILE,

SUITED TO THE SOUTHERN PLANTER.

Inventors and Patentees are invited to a correspondence, (post paid) relating to Plows, Harrows, Rollers, Cultivators, Horse Powers, Grain and Rice Thrashers, Hulling Machines, Fanning Mills, Cotton Gins, and all other articles useful to Planters and Agriculturists.

It may be proper to add that the great Mobile and Ohio Rail Road, of which Mobile will be the depot, will go on to a rapid and certain completion, and that this will shortly be a point inferior to none in the Union, for the sale of everything connected with the vast interest of Agriculture in Alabama, Mississippi, Tennessee and Kentucky, and through the terminus of the Road at the mouth of the Ohio, with the "Great West," whose outlet this will be in a fair and profitable rivalry with New Orleans.

We will make prompt returns of all business confided to us. Agricultural works received on commission.

Mobile, Sept., 1848. S. B. NORTH & CO.

Refer to: Hon. John Gayle, Member of Congress; Messrs. Stewart & Easton, Esqs.; J. G. Lyon, Esq., U. S. Marshal. Messrs. LeBaron & Son; J. C. Hodges, Esq.; Collier H. Minge, Esq.; Messrs. L. Merchant & Co.; J. H. Rivers & Co.; Robert Desha & Co.; David Stodder, Esq. nov 1-6m

AGRICULTURAL IMPLEMENTS.—LABOR SAVING MACHINERY.

—GEORGE PAGE, Machinist & Manufacturer, Baltimore st. West of Schröder st. Baltimore, is now prepared to supply Agriculturists and all others in want of Agricultural and Labor-saving MACHINERY, with any thing in his line. He can furnish Portable Saw Mills to go by steam, horse or water power; Lumber Wheels; Horse Powers of various sizes, ranging in price from \$55 to \$200, and each simple, strong and powerful. His *Horse Power & Threshing Machine*, he is prepared to supply at the low price of \$125 complete; the Threshing Machines without the horse power, according to size, at \$30, 40, 65 and \$75; Improved Seed and Corn Planter, Portable Tobacco Press; Portable Grist Mills complete, \$12.



R. SINCLAIR, Jr. & Co.
MANUFACTURERS AND SEEDSMEN,
BALTIMORE, MD.

HAVE FOR SALE, American and European FIELD and GARDEN SEEDS, embracing all the new and most valuable sorts.

PLOWS—About 30 different patterns, among which are the famous Maryland Self Sharpening—the quantity and assortment is probably the largest to be found in this country.

Cylindrical and Common Straw Cutters—extra finish, and about 10 sizes and kinds.

Corn and Cob Crushers—This machine is admirably adapted for crushing all kinds of grain.

Domestic Burr Stone Corn Mill—The most perfect Mill of the kind in this country.

Corn Shellers for Horse and Hand Power—embracing all the most approved patterns.

Double Acting Fanning Mills—Late improved, and excellent. **Line Spreaders or Centrifugal Disseminators.**

Horse Powers—4 sizes on the Lever Plan, and 2 ditto End-less Chain.

Thrashing Machines—4 sizes, made of wrought iron, very simple and strong.

Wheat, Corn and Small Seed Drills.
Horse, Grain and Hay Rakes.

Grindstones on Friction Rollers—Ox Yokes—Post Hole Augurs—Also a large assortment of GARDEN and FIELD

TOOLS, SEED POTATOES, TREES, PLANTS, &c. &c.

For particulars see descriptive Catalogue, to be had at our Store.

R. SINCLAIR, JR. & CO.,
mh.1 Light Street, near Pratt Street, Baltimore.



JOHN FEAST,
FLORIST AND SEEDSMAN.

Offers for sale at his only establishment in the city, Corner of Pine and Lexington Streets, a fresh supply of Garden Seeds, per ship Harvest from Liverpool, in fine order, and warranted, with everything in his line of business, low for Cash, as Trees, Shrubs, Greenhouse Plants, &c. All orders punctually attended to, and safely packed. mh.1-4t.

HAYLAND FOR SALE.

IN consequence of my continued ill health, I offer for sale, my valuable farm, formerly the estate of D. Stuart, esq., who lavished many thousand dollars upon it, enriching the soil, &c. with large quantities of lime, manure, &c.; it is located 5 miles from Baltimore, between the Harford and Bel-air roads, the latter being free from toll gates.

The improvements are far superior to those generally erected on farms. The fruit is of choice kinds, the water very good, and the location high and remarkably healthy.

The road from its entrance has been well gravelled and several hundred feet paved neatly in the best manner with stone, affording in damp weather a pleasant walk of one-fourth of a mile, also a handsome avenue or paved street 54 feet wide and extending beyond the barns, (a great advantage in muddy weather), on one side of which is a large stone barn, cow, hog, smoke and steam houses 180 feet in length. On the opposite side are a beautiful brick dairy, a large rough-cast 3 story stone dwelling, a handsome stone granary and carriage house, stable, poultry and wagon houses.

The main dwelling (a neat cottage with porticos), the ice and manager's houses are located at convenient distances from the above, and all of which at a large cost have been erected within a few years past.

There are 200 acres of land (100 in wood and paving stone, both quite valuable so near the city). The soil is a fine light loam, excepting the meadows, (now in timothy,) which are white oak bottom. The land is in a high state of cultivation, the whole having been recently re-limed and improved by bone-dust, ashes, &c. If used as a garden and dairy farm it would be very lucrative. It will be sold in one lot or divided into lots for country seats, &c. The terms will be very liberal—approved city property or stocks will answer.

JOHN H. KEENE,
February 23d, 1849. mh.1 Hayland, near Balto.

NATIONAL
Agricultural and Seed Warehouse,
WASHINGTON CITY.

THE Proprietor of this establishment respectfully invites the attention of Maryland and Virginia agriculturists to his stock of Implements and Machinery, which is as extensive and varied as that of any similar house in the United States.

His Plovers, Cultivators, Seed Drills, Harrows, Grain Cradles, Cutting Boxes, Corn Shellers, Horse Powers, Fanning Mills, &c. &c., are of the most approved kinds, and, in all cases, are warranted to give satisfaction to the purchaser.

In the Seed department, the utmost care is taken to guard all parties against disappointment; and the public may rely upon being furnished only with such as are known to be fresh and genuine.

In addition to his usual supply, he has a large lot of very superior new Clover Seed, entirely free from ripple; also Orchard Grass Seed, very handsomely cleaned; Timothy, Herds Grass, and every other variety of field Seeds usually kept in the best Northern houses.

FITZHUUGH COYLE,
marl—2t 7th street, Washington, D. C.

PERUVIAN AND PATAGONIA GUANO.—Having just received a cargo of very superior Peruvian Guano, I invite farmers and others, who wish to secure a spring supply, to give me an early call. It is inspected and marked "No. 1."

I have also in store, a lot of Patagonian Guano, in dry and substantial barrels, which will be sold low.

FITZHUUGH COYLE,
National Agricultural and Seed Warehouse,
feb 1-2t 7th Street, Washington, D. C.

VALUABLE LAND FOR SALE.

THE undersigned offers for sale, in one body, or in portions, or for Lease to tenants well recommended, the well known **CARPENTER'S POINT FARM and Fisheries**, situated in Cecil Co. Md.—at the head of the Chesapeake Bay, and on the west bank of the North East River. The shores command the waters both of the bay and the river, and are among the most valuable in the State; they include a number of buildings and sheds necessary for the active prosecution of the fisheries; the land is of easy cultivation, and enjoys the advantages of ready access by water communication, to the markets of Havre de Grace and Baltimore. The entire tract contains about 650 acres, of which some 125 are under actual cultivation, as many more lying out as common, whilst the remainder one half has been recently cleared and the other is very heavily timbered.

For further information, or for wood-cut map showing the position and shape of the property, and the prominent places in its vicinity, application may be made to George Earle, Elkton, Md.—J. F. Houston, Columbia, Pa.—J. S. Skinner & Son, Phila.—the office of this paper, or to
ml **J. HOWARD McHENRY, Baltimore.**

PLOUGHS! PLOUGHS!!

AMONG the Ploughs at Whitman's will be found the Prouty & Mears; Ruggles, Nourse & Mason's; Minor & Horton; Moore & Chamberlain; Wiley; Woodcock; Davis & Chenoweth, of all sizes; and various other kinds of Ploughs in use in Maryland.

The Premium Hay and Manure Forks, Thermometer Churns, Sausage Stuffers, and various other premium articles too numerous to particularize, are also found at Whitman's, Corner of Light & Pratt-sts., Baltimore. dec 1

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